

Nutrient Management Plan

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Prepared by: John Donaldson



Nutrient Management Plan

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance for the animal feeding operation. It includes background information and provides guidance, reference information and Web-based sites where up-to-date information can be obtained. Refer to the Producer Activity document for information about day-to-day management activities and recordkeeping. Both this document and the Producer Activity document shall remain in the possession of the producer/landowner.

Farm contact information: Hickory Corner Dairy
c/o Jim or Ann Shipley
2160 Sharp Road
Speedwell Tn, TN 37870
423-869-0271

Latitude/Longitude:

Plan Period: Nov 2009 - Oct 2012

Owner/Operator

As the owner/operator of this CNMP, I, as the decision maker, have been involved in the planning process and agree that the items/practices listed in each element of the CNMP are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: _____ Date: _____
Name: _____

Nutrient Management Planner

The Nutrient Management component of this plan meets the Tennessee Nutrient Management 590 and Waste Utilization 633 Conservation Practice Standards.

Signature: _____ Date: _____
Name: _____
Title: _____ Certification Credentials: _____

Addendum to Nutrient Management Plan:

By approval of this plan, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO rule (1200-4-5-.14) that apply to my CAFO operation.

1. All clean water (including rainfall) is diverted, as appropriate, from the production area.
2. All animals in confinement are prevented from coming in direct contact with waters of the state.
3. All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
4. All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
5. All records outlined in 1200-4-5-.14(16) d-f will be maintained and available on-site.
6. Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed after April 13, 2006 are or will be located in accordance with NRCS Conservation Practice Standard 313.
7. Drystacks of manure or stockpiles of litter are always kept covered under roof or tarps.
8. An *Annual Report* will be written for my operation and submitted between January 1 and February 15 of each year. It will include all information required by rule [1200-4-5-.14(16)g].

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Section 1. Background and Site Information

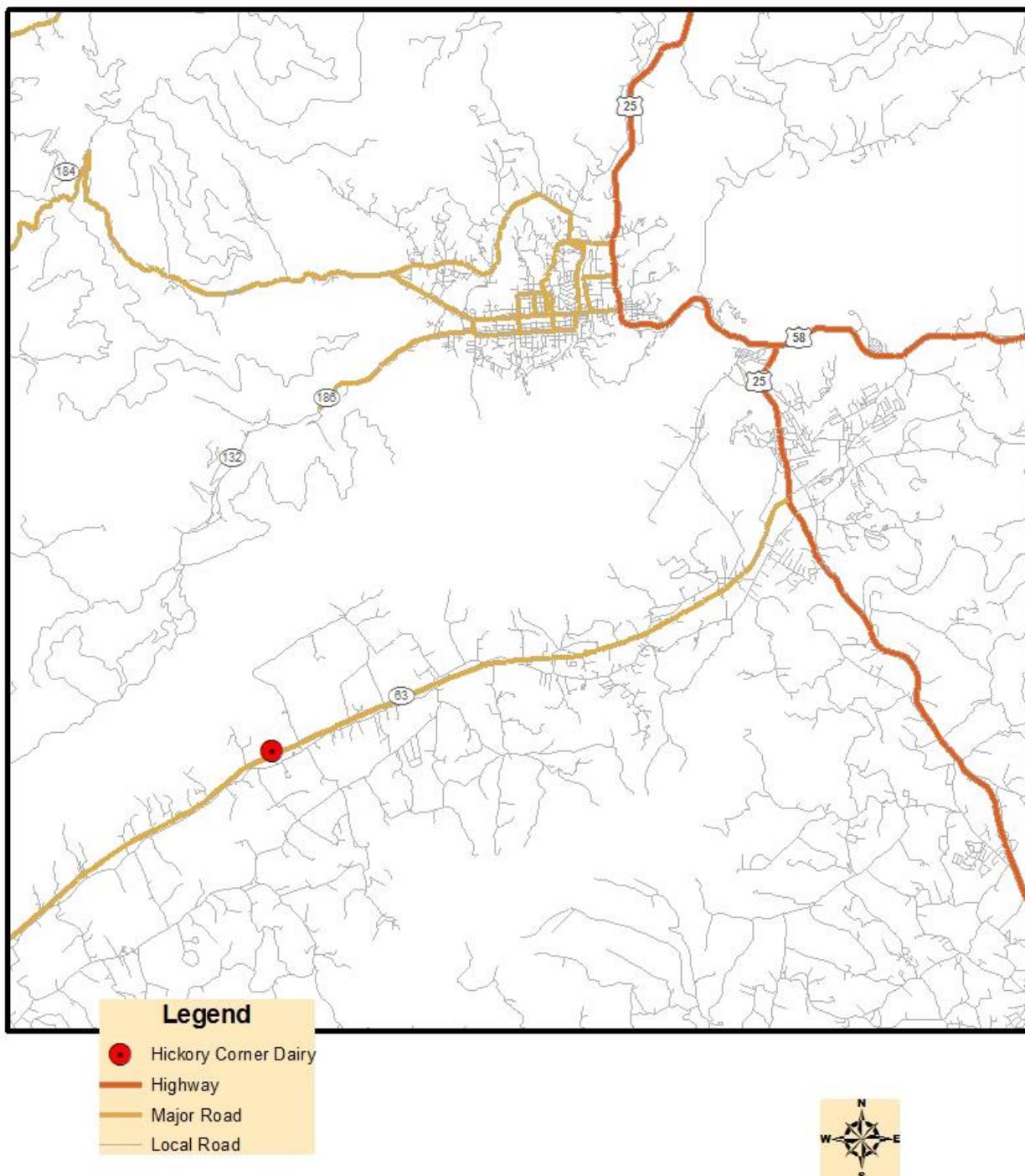
1.1. General Description of Operation

A Comprehensive Nutrient Management Plan (CNMP) is a conservation plan that is unique to animal feeding operations. This CNMP incorporates conservation practices and management activities which, when combined into a system, will help ensure that both agriculture production goals and natural resources protection goals are achieved. This CNMP addresses natural resource concerns dealing with soil erosion, manure, and organic byproducts, and their potential impacts on water quality, which may derive from an animal feeding operation (AFO). This CNMP is developed to assist an AFO owner/operator in meeting all applicable management activities and conservation practices which may be required to meet local, tribal, State, or Federal water quality goals, or regulations.

County: Claiborne
State: Tennessee

Hickory Corner Dairy

Date: 10/15/09



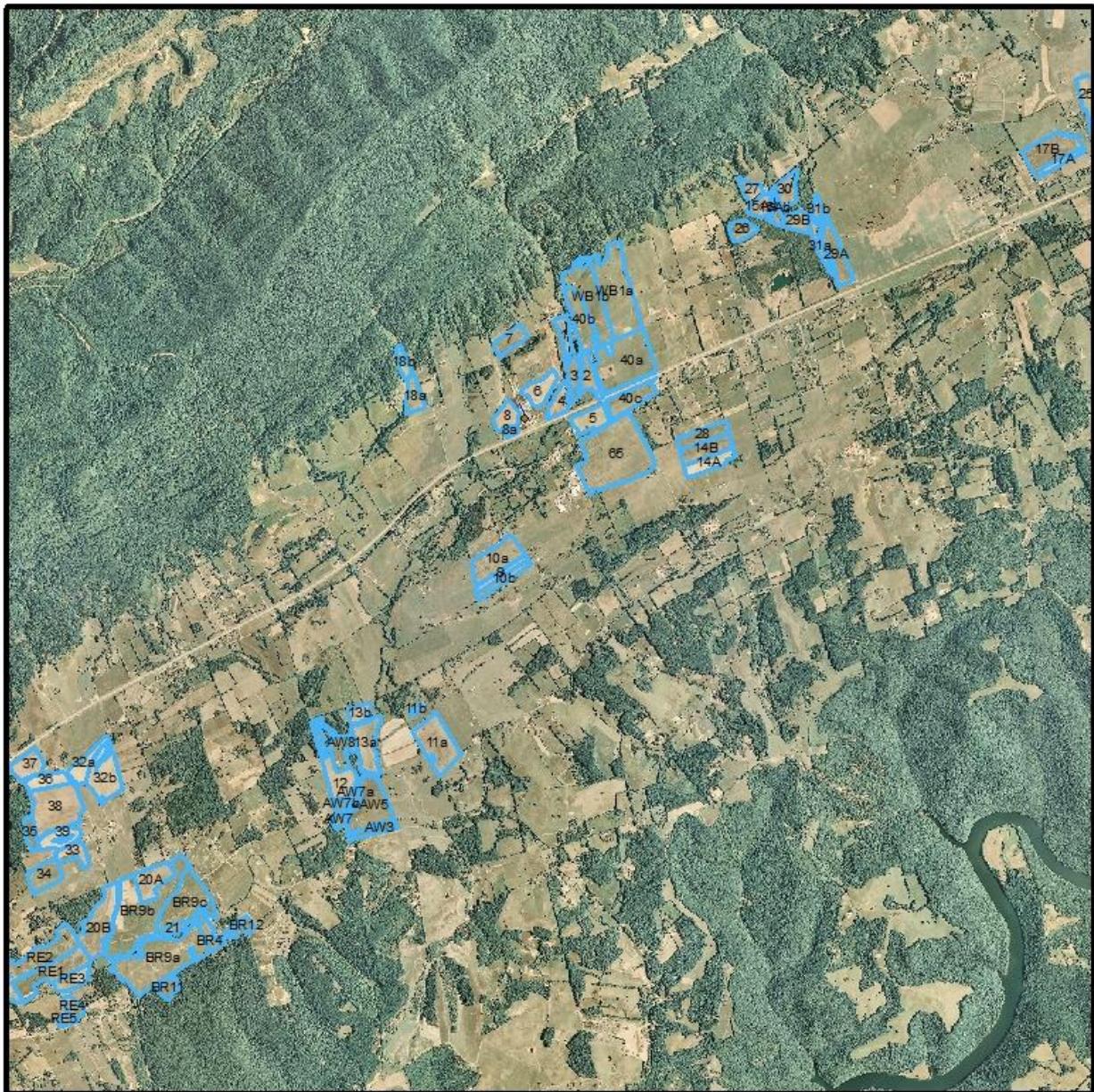
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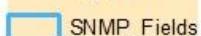
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State: Tennessee

Hickory Corner Dairy

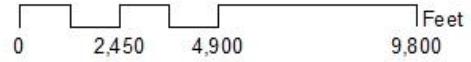
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1.1. General Description of Operation

The Hickory Corner Dairy is a 500 cow dairy located at 2160 Sharp Road. The dairy is located in the valley and ridge region of the state of Tennessee. The operation consists of 500 wet cows, 100 dry cows and 150 breeding heifers. The wet cows are 100 percent confinement, dry cows are feed inside the collection area, and heifers are 50 percent confinement. Crops consist of corn silage, corn grain, winter annuals and tobacco, crops are grown on 600 acres of cropland.

1.2. Sampling, Calibration and Other Statements

Manure sampling frequency

Manure samples will be taken in the fall prior to application.

Soil testing frequency

Soil test will be renewed in every three years with a composite sample for each field and identified to match field identification used in this plan.

Equipment calibration method and frequency

Application equipment will be calibrated with documentation annually.

Measures to prevent direct contact of animals with water

Watering facilities are to be installed in all feeding areas as well as fencing to discourage animal contact with state waters..

Manure applications

All manure will be surface applied in spring and fall at 1 year p rates.

Heavy Use areas will be scraped when waste reaches 6- 8 inches or prior to any expected rainfall event.

Manure applications in this plan are based on MWPS 2004 data. Manure analysis will be required annually after implementation of this plan and will follow UT Ext. SOP for manure sampling.

Vegetation establishment is required around the buildings and storage structures to reduce soil erosion, this offsite nutrient and pathogen transport.

All disturbed areas, including slopes of pads, will be planted to permanent vegetation. If construction is during seasons not suited for planting warm or cool season grasses, temporary vegetation will be established until the recommended planting dates. Refer to Application and Maintenance of Conservation Practices and specifically NRCS practice standard 342, Critical Area Treatment, for guidance.

All conservation practices and management activities planned and implemented as part of this CNMP should meet NRCS technical standards. For those elements, for which NRCS does not maintain

technical standards, the criteria established by Land Grant Universities, industry, or other technically qualified entities will be met.

Veterinary Waste Management

All veterinary waste will be either disposed of through an approved land fill and sharps containers or by the attending veterinarian.

Revision Trigger

This nutrient management plan shall be reviewed when the results of soil tests are received to insure manure application rates are appropriate. This plan must be re-certified at least every five year. Modifications of the NMP will require re-certification whenever there are substantial changes made to the animal or crop operations. Substantial changes are defined as a change in crop sequence that would not allow allocation of the nutrients using Manure Management Planner (MMP) or equivalent method, change in manure application area size greater than 15% or change in livestock numbers by greater than 10%.

NMP Lifespan

This nutrient management plan shall be reviewed when the results of soil tests are received to insure manure application rates are appropriate. This plan must be re-certified at least every five years. Updates of this CNMP will require re-certification whenever there are substantial changes made to the animal or crop operations. This plan will be amended when required by the permit.

Section 2.

2.1. Manure Storage

Storage ID	Type of Storage	Pumpable or Spreadable Capacity	Annual Manure Collected	Maximum Days of Storage
Holding Pond 1	Holding pond	4,000,000 Gal	3,196,786 Gal	457
Dry Stack	Dairy manure dry stack	1,200 Tons	248 Tons	1,766
Calf Barn	Manure pack	100 Tons	120 Tons	304
Calf Shed	Manure pack	100 Tons	120 Tons	304

2.2. Animal Inventory

Animal Group	Type or Production Phase	Number of Animals	Average Weight (Lbs)	Confinement Period	Manure Collected (%)	Storage Where Manure Will Be Stored
Wet Cows	Milk cow (dairy)	500	1,300	Jan Early - Dec Late	100	Holding Pond 1
Dry Cows	Dry cow (dairy)	100	1,200	Jan Early - Dec Late	25	Holding Pond 1
Heifers	Breeding heifer (dairy)	40	600	Jan Early - Dec Late	40	Dry Stack
Breed Heifers	Breeding heifer (dairy)	40	850	Jan Early - Dec Late	40	Dry Stack
Veal Calves	Veal calf	150	150	Jan Early - Dec Late	50	Calf Barn
Calves	Growing heifer/steer (dairy)	400	75	Jan Early - Dec Late	50	Calf Shed

(1) Number of Animals is the average number of animals that are present in the production facility at any one time.

(2) If Manure Collected is less than 100%, this indicates that the animals spend a portion of the day outside of the production facility or that the production facility is unoccupied one or more times during the confinement period.

2.3. Normal Mortality Management

To decrease non-point source pollution of surface and ground water resources, reduce the impact of odors that result from improperly handled animal mortality, and decrease the likelihood of the spread of disease or other pathogens, approved handling and utilization methods shall be implemented in the handling of normal mortality losses. If on-farm storage or handling of animal mortality is done, NRCS Standard 316, Animal Mortality Facility, will be followed for proper management of dead animals.

Plan for Proper Management of Dead Animals

The following table describes how you plan to manage normal animal mortality in a manner that protects surface and ground water quality.

The Hickory Corner Dairy operation will use burial as the primary mortality disposal method. All mortalities will be collected upon discovery and buried.

Section 3. Farmstead Safety and Security

3.1. Emergency Response Plan

In Case of an Emergency Storage Facility Spill, Leak or Failure

Implement the following first containment steps:

- a. Stop all other activities to address the spill.
- b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
- c. Call for help and excavator if needed.
- d. Complete the clean-up and repair the necessary components.
- e. Assess the extent of the emergency and request additional help if needed.

In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

Implement the following first containment steps:

- a. Stop all other activities to address the spill and stop the flow.
- b. Call for help if needed.
- c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
- d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
- e. If flow is coming from a tile, plug the tile with a tile plug immediately.
- f. Assess the extent of the emergency and request additional help if needed.

Emergency Contacts

Department / Agency	Phone Number
Fire	911
Rescue services	911
State veterinarian	615-781-5310
Sheriff or local police	911

Nearest available excavation equipment/supplies for responding to emergency

Equipment Type	Contact Person	Phone Number
Track Hoe and Dozer	On Site	

Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
EPA Emergency Spill Hotline	1-888-891-8332
County Health Department	423-626-4291
Other State Emergency Agency	931-823-1465

Be prepared to provide the following information:

- a. Your name and contact information.
- b. Farm location (driving directions) and other pertinent information.
- c. Description of emergency.
- d. Estimate of the amounts, area covered, and distance traveled.
- e. Whether manure has reached surface waters or major field drains.
- f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
- g. Current status of containment efforts.

3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before entering the operation or any production or storage facility.

3.3. Catastrophic Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.

Plan for Catastrophic Animal Mortality Handling

The following table describes how you plan to manage catastrophic loss of animals in a manner that protects surface and ground water quality. You must follow all national, state and local laws, regulations and guidelines that protect soil, water, air, plants, animals and human health.

Burial will be used to dispose of catastrophic mortalities. Contact the state veterinarians office and the local TDEC office.

Important! In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

Authority name APHIS
Contact name Phillip Gordon
Phone number 615-781-5310

3.4. Chemical Handling

If checked, the indicated measures will be taken to prevent chemicals and other contaminants from contaminating process waste water or storm water storage and treatment systems.

	This is not a regulatory-agency permitted facility. This section does not apply.
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	<i>Measure</i>
XX	All chemicals are stored in proper containers. Expired chemicals and empty containers are properly disposed of in accordance with state and federal regulations. Pesticides and associated refuse are disposed of in accordance with the FIFRA label.
XX	Chemical storage areas are self-contained with no drains or other pathways that will allow spilled chemicals to exit the storage area.
XX	Chemical storage areas are covered to prevent chemical contact with rain or snow.
XX	Emergency procedures and equipment are in place to contain and clean up chemical spills.
XX	Chemical handling and equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.
XX	All chemicals are custom applied and no chemicals are stored at the operation. Equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.

Section 4. Soil and Risk Assessment Analysis

4.1. Soil Information

Field	Map Unit	Soil Component Name	Surface Texture	Slope Range (%)	OM Range (%)	Bedrock Depth (in.)
17 (B)	Crg	Etowah	SIL	2-7%	1-3%	
17 (A)	Crg	Etowah	SIL	2-7%	1-3%	
65	Ts	Talbott	SIL	0-7%	0.5-2%	30
25	Crg	Etowah	SIL	2-7%	1-3%	
7	Ssr	Sequoia	SICL	8-15%	0.5-1%	30
1	St	Sequatchie	FSL	1-7%	1-3%	
3	St	Sequatchie	FSL	1-7%	1-3%	
2	Crg	Etowah	SIL	2-7%	1-3%	
5	Crg	Etowah	SIL	2-7%	1-3%	
40 (c)	Cr	Etowah	SIL	8-15%	1-3%	
40 (a)	Cr	Etowah	SIL	8-15%	1-3%	
40 (b)	Crg	Etowah	SIL	2-7%	1-3%	
10 (b)	Dwr	Dewey	SICL	8-15%	0.5-1%	
9	Dwr	Dewey	SICL	8-15%	0.5-1%	
10 (a)	Dwr	Dewey	SICL	8-15%	0.5-1%	
AW3	Ccz	Clarksville	CR-SIL	25-50%	0.5-2%	
AW5	Dwt	Dewey	SICL	15-30%	0.5-1%	
AW7	Ecr	Etowah	SICL	2-12%	0.5-1%	
AW7 (b)	MI	Melvin	SIL	0-2%	0.5-3%	
AW7 (a)	MI	Melvin	SIL	0-2%	0.5-3%	
12	Ecr	Etowah	SICL	2-12%	0.5-1%	
AW8	RIT	Rock outcrop	UWB	7-30%	-%	0
28	Ts	Talbott	SIL	0-7%	0.5-2%	30
11 (a)	Cr	Etowah	SIL	8-15%	1-3%	

Field	Map Unit	Soil Component Name	Surface Texture	Slope Range (%)	OM Range (%)	Bedrock Depth (in.)
11 (b)	Stx	Holston	FSL	7-20%	0.5-2%	
13 (a)	Pf	Philo	SL	0-3%	2-4%	
13 (b)	Tcr	Talbott	SICL	7-15%	0.5-1%	30
14 (A)	Tcr	Talbott	SICL	7-15%	0.5-1%	30
14 (B)	Ts	Talbott	SIL	0-7%	0.5-2%	30
26	Cr	Etowah	SIL	8-15%	1-3%	
15Aa	Pf	Philo	SL	0-3%	2-4%	
27	Crg	Etowah	SIL	2-7%	1-3%	
15Ab	St	Sequatchie	FSL	1-7%	1-3%	
29 (B)	St	Sequatchie	FSL	1-7%	1-3%	
30	Cr	Etowah	SIL	8-15%	1-3%	
31 (b)	St	Sequatchie	FSL	1-7%	1-3%	
31 (a)	TI	Roane	CR-SIL	0-7%	0.5-2%	
29A	TI	Roane	CR-SIL	0-7%	0.5-2%	
18a	Cr	Etowah	SIL	8-15%	1-3%	
18b	MI	Melvin	SIL	0-2%	0.5-3%	
BR9a	RIT	Rock outcrop	UWB	7-30%	-%	0
21	MI	Melvin	SIL	0-2%	0.5-3%	
BR9b	MI	Melvin	SIL	0-2%	0.5-3%	
BR9c	RIT	Rock outcrop	UWB	7-30%	-%	0
20A	Dwr	Dewey	SICL	8-15%	0.5-1%	
BR4	Fs	Fullerton	CR-SIL	5-12%	0.5-2%	
20B	Tcr	Talbott	SICL	7-15%	0.5-1%	30
BR11	Fc	Fullerton	CR-SIL	5-12%	0.5-2%	
34	Dwr	Dewey	SICL	8-15%	0.5-1%	
39	Dwt	Dewey	SICL	15-30%	0.5-1%	
33	Dwr	Dewey	SICL	8-15%	0.5-1%	
38	Ds	Dewey	SIL	3-8%	1-3%	
35	Dwr	Dewey	SICL	8-15%	0.5-1%	
36	Tcr	Talbott	SICL	7-15%	0.5-1%	30

Field	Map Unit	Soil Component Name	Surface Texture	Slope Range (%)	OM Range (%)	Bedrock Depth (in.)
37	Es	Etowah	SIL	2-10%	1-3%	
32a	Ho	Holston	FSL	0-15%	0.5-2%	
32b	Ts	Talbott	SIL	0-7%	0.5-2%	30
WB1b	Tcr	Talbott	SICL	7-15%	0.5-1%	30
WB1a	Tcr	Talbott	SICL	7-15%	0.5-1%	30
RE2	Dwr	Dewey	SICL	8-15%	0.5-1%	
RE1	TI	Roane	CR-SIL	0-7%	0.5-2%	
RE3	LI	Linside	SIL	0-3%	2-4%	
RE4	TI	Roane	CR-SIL	0-7%	0.5-2%	
RE5	TI	Roane	CR-SIL	0-7%	0.5-2%	
BR 12	Fs	Fullerton	CR-SIL	5-12%	0.5-2%	
8	Cr	Etowah	SIL	8-15%	1-3%	
8a	SsT	Rock outcrop	UWB	0-7%	-%	0
6	Cr	Etowah	SIL	8-15%	1-3%	
4	St	Sequatchie	FSL	1-7%	1-3%	

County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 1

Date: 10/15/09



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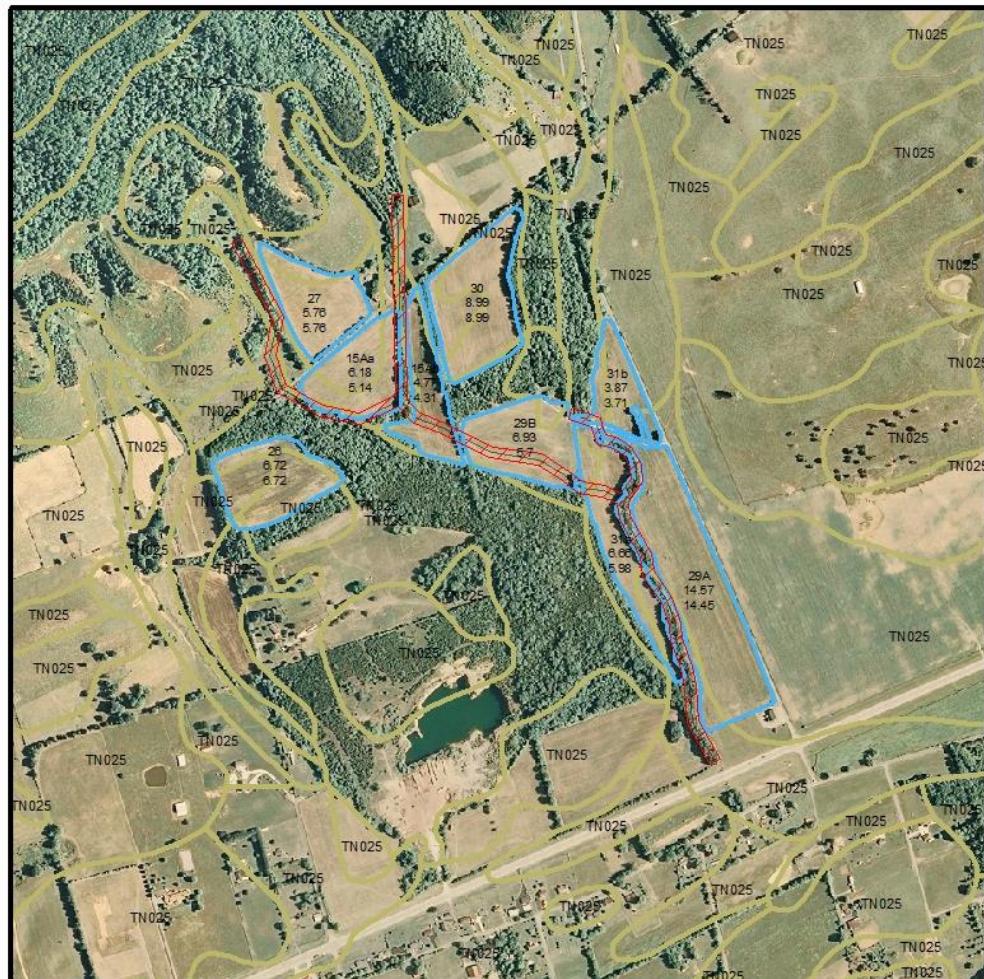


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Hickory Corner Dairy Soils 2

Date: 10/15/09



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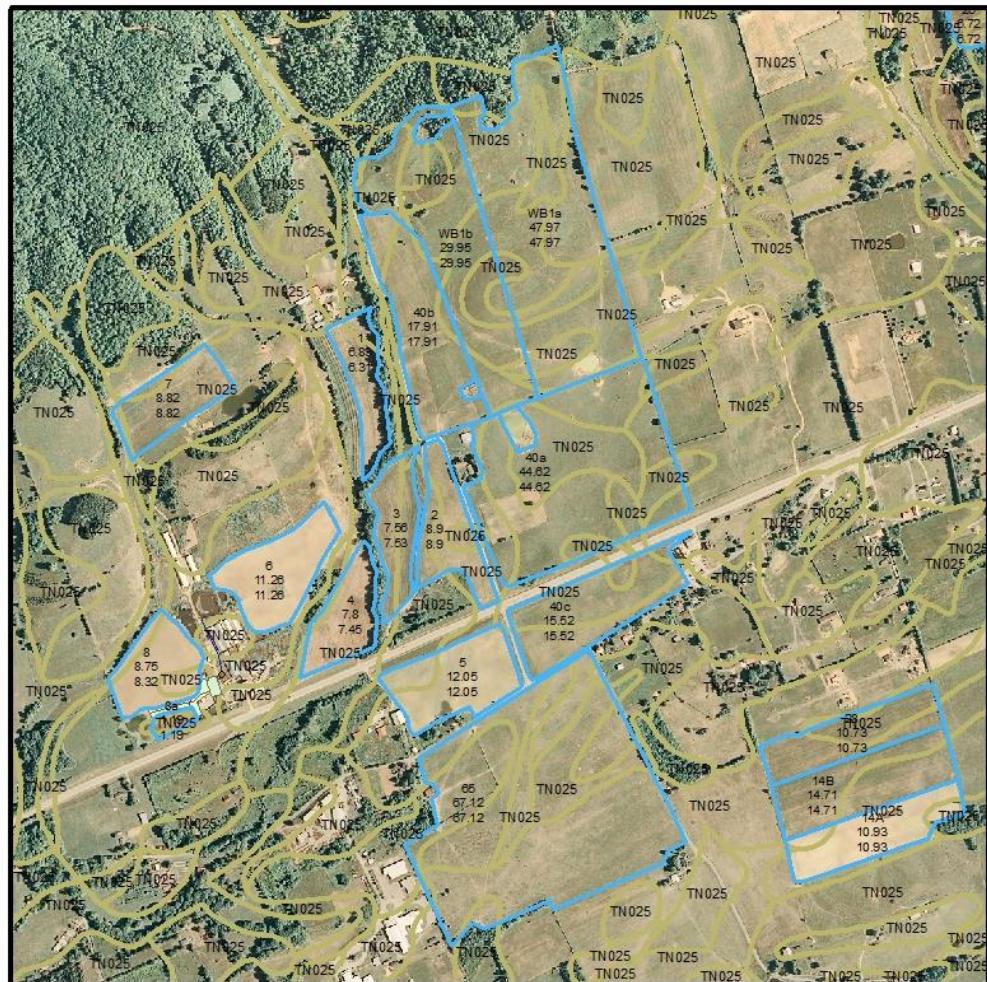


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0 425 850 1,700 Feet

Hickory Corner Dairy Soils 3

Date: 10/15/09



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0 550 1,100 2,200 Feet

County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 4

Date: 10/15/09

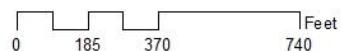


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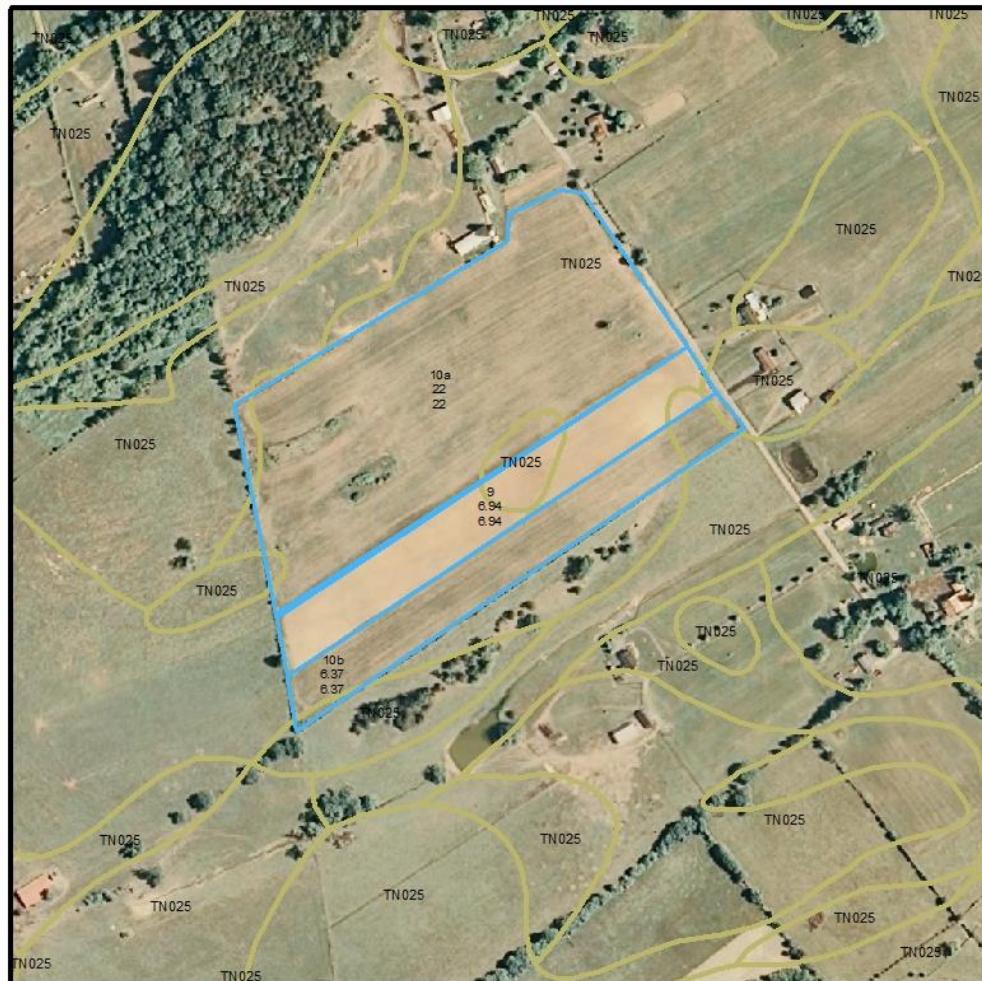
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 5

Date: 10/15/09

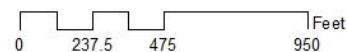


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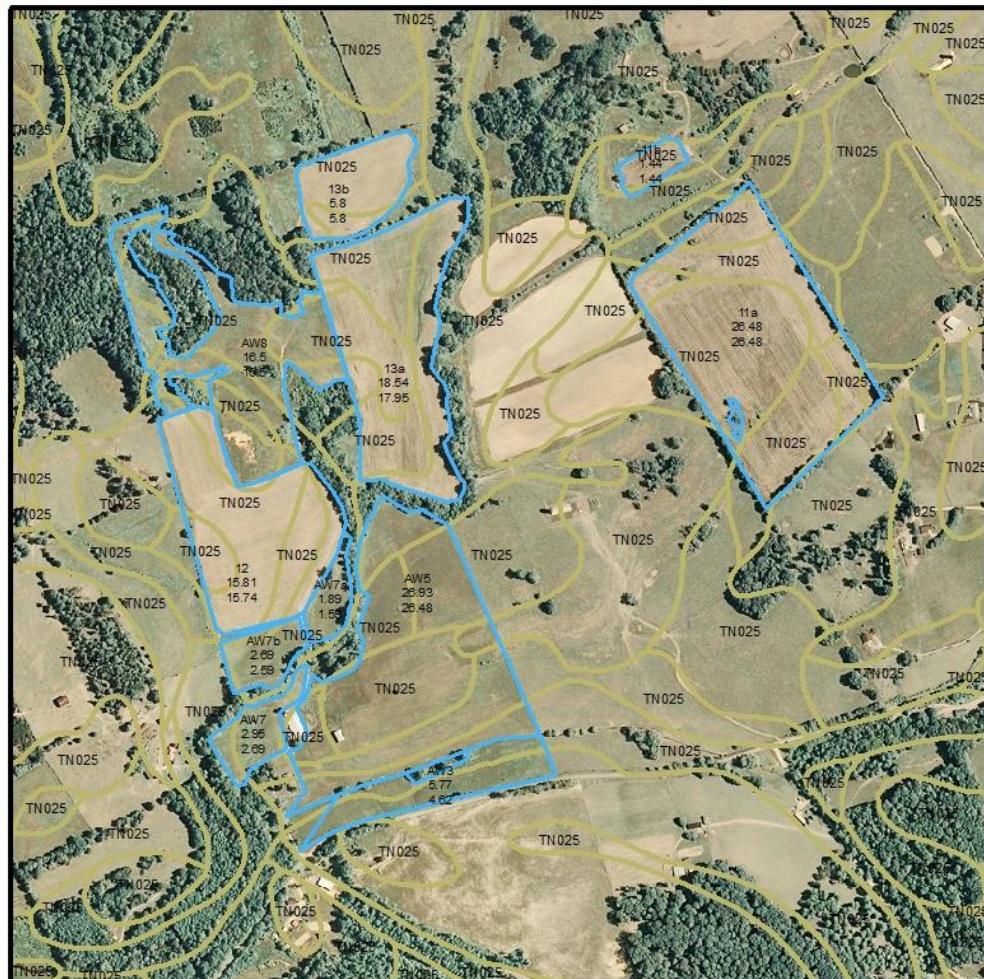
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 6

Date: 10/15/09

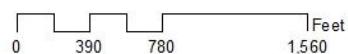


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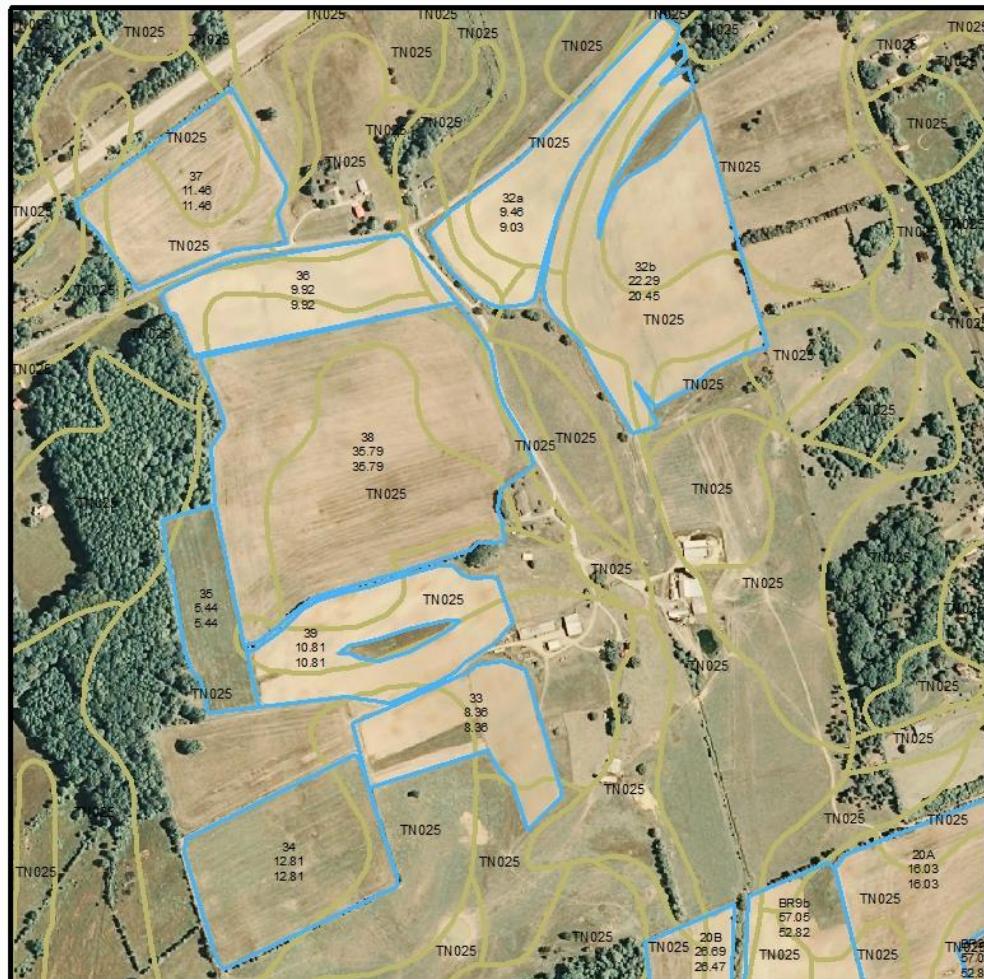
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 7

Date: 10/15/09



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- SNMP_Soils



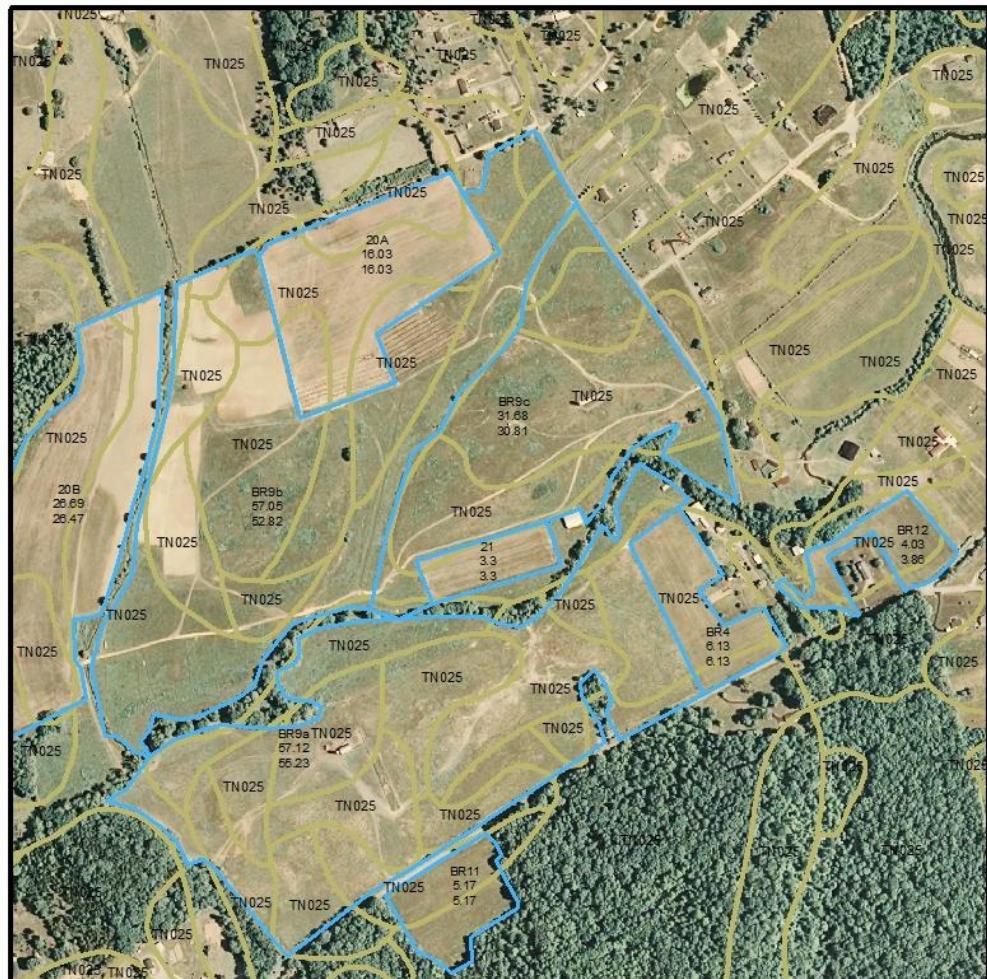
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0 335 670 1,340 Feet

County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 8

Date: 10/15/09

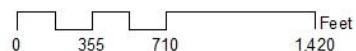


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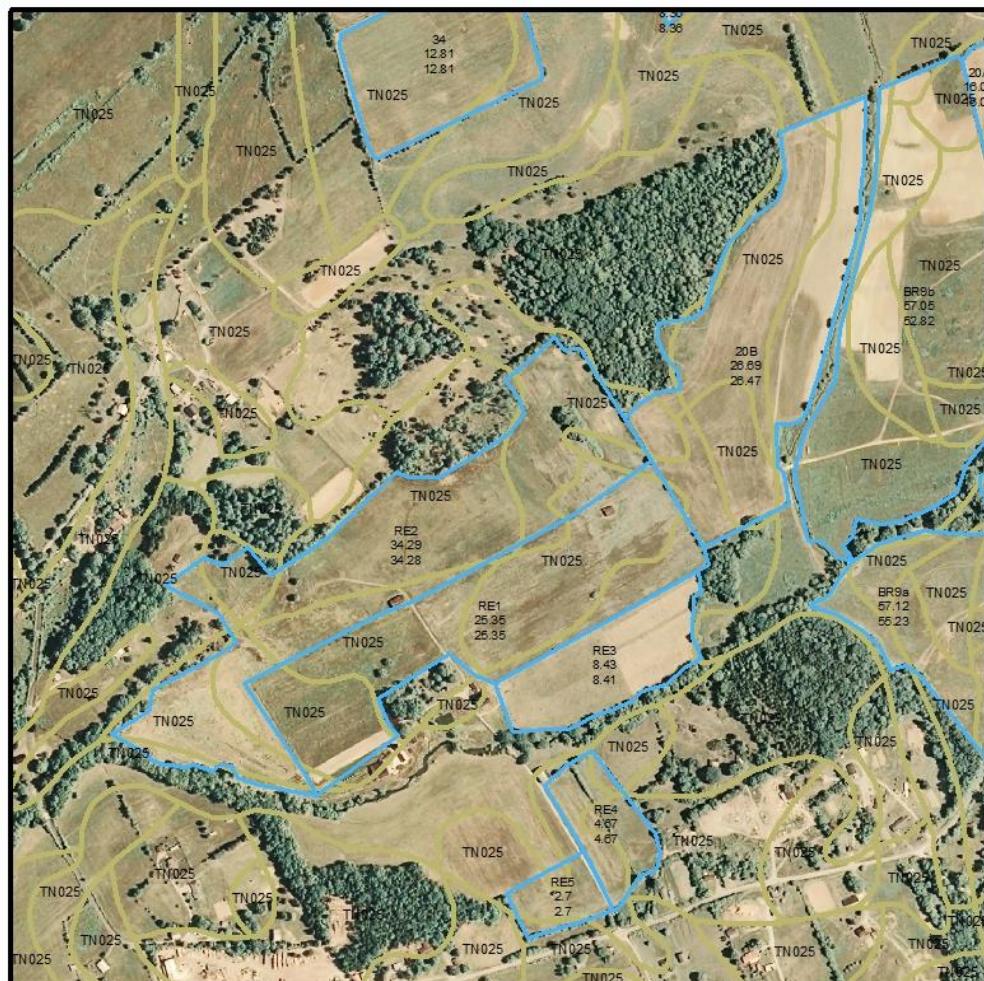
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Soils 9

Date: 10/15/09

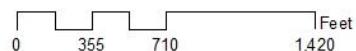


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4.2. Predicted Soil Erosion

Field	Predominant Soil Type	Slope (%)	Wind (Ton/Ac/Yr)	Irrigation (Ton/Ac/Yr)	Gully (Ton/Ac/Yr)	Ephemeral (Ton/Ac/Yr)	Plan Avg. Soil Loss (Ton/Ac/Yr)
17 (B)	Crg (Etowah SIL)	4.5					10.5
17 (A)	Crg (Etowah SIL)	4.5					35.7
65	Ts (Talbott SIL)	3.5					8.2
25	Crg (Etowah SIL)	4.5					0.6
7	Ssr (Sequoia SICL)	11.5					27.2
1	St (Squatchie FSL)	4.0					8.1
3	St (Squatchie FSL)	4.0					8.1
2	Crg (Etowah SIL)	4.5					10.5
5	Crg (Etowah SIL)	4.5					
40 (c)	Cr (Etowah SIL)	11.5					2.1
40 (a)	Cr (Etowah SIL)	11.5					2.1
40 (b)	Crg (Etowah SIL)	4.5					0.8
10 (b)	Dwr (Dewey SICL)	11.5					23.7
9	Dwr (Dewey SICL)	11.5					69.1
10 (a)	Dwr (Dewey SICL)	11.5					23.7
AW3	Ccz (Clarksville CR-SIL)	37.5					7.9
AW5	Dwt (Dewey SICL)	22.5					
AW7	Ecr (Etowah SICL)	7.0					1.0
AW7 (b)	MI (Melvin SIL)	1.0					0.3
AW7 (a)	MI (Melvin SIL)	1.0					0.3
12	Ecr (Etowah SICL)	7.0					
AW8	RIT (Rock outcrop UWB)	18.5					
28	Ts (Talbott SIL)	3.5					8.2
11 (a)	Cr (Etowah SIL)	11.5					31.6
11 (b)	Stx (Holston FSL)	13.5					29.9
13 (a)	Pf (Philo SL)	1.5					2.9
13 (b)	Tcr (Talbott SICL)	11.0					23.5
14 (A)	Tcr (Talbott SICL)	11.0					73.3
14 (B)	Ts (Talbott SIL)	3.5					8.2

Field	Predominant Soil Type	Slope (%)	Wind (Ton/Ac/Yr)	Irrigation (Ton/Ac/Yr)	Gully (Ton/Ac/Yr)	Ephemeral (Ton/Ac/Yr)	Plan Avg. Soil Loss (Ton/Ac/Yr)
26	Cr (Etowah SIL)	11.5					
15Aa	Pf (Philo SL)	1.5					
27	Crg (Etowah SIL)	4.5					
15Ab	St (Squatchie FSL)	4.0					
29 (B)	St (Squatchie FSL)	4.0					
30	Cr (Etowah SIL)	11.5					
31 (b)	St (Squatchie FSL)	4.0					
31 (a)	Tl (Roane CR-SIL)	3.5					
29A	Tl (Roane CR-SIL)	3.5					
18a	Cr (Etowah SIL)	11.5					31.6
18b	Ml (Melvin SIL)	1.0					3.1
BR9a	RIT (Rock outcrop UWB)	18.5					
21	Ml (Melvin SIL)	1.0					
BR9b	Ml (Melvin SIL)	1.0					0.3
BR9c	RIT (Rock outcrop UWB)	18.5					
20A	Dwr (Dewey SICL)	11.5					71.8
BR4	Fs (Fullerton CR-SIL)	8.5					1.2
20B	Tcr (Talbott SICL)	11.0					25.5
BR11	Fc (Fullerton CR-SIL)	8.5					1.2
34	Dwr (Dewey SICL)	11.5					71.8
39	Dwt (Dewey SICL)	22.5					
33	Dwr (Dewey SICL)	11.5					71.8
38	Ds (Dewey SIL)	5.5					10.9
35	Dwr (Dewey SICL)	11.5					71.8
36	Tcr (Talbott SICL)	11.0					79.1
37	Es (Etowah SIL)	6.0					13.9
32a	Ho (Holston FSL)	7.5					
32b	Ts (Talbott SIL)	3.5					27.4
WB1b	Tcr (Talbott SICL)	11.0					
WB1a	Tcr (Talbott SICL)	11.0					

Field	Predominant Soil Type	Slope (%)	Wind (Ton/Ac/Yr)	Irrigation (Ton/Ac/Yr)	Gully (Ton/Ac/Yr)	Ephemeral (Ton/Ac/Yr)	Plan Avg. Soil Loss (Ton/Ac/Yr)
RE2	Dwr (Dewey SICL)	11.5					
RE1	TI (Roane CR-SIL)	3.5					
RE3	LI (Linside SIL)	1.5					0.3
RE4	TI (Roane CR-SIL)	3.5					0.6
RE5	TI (Roane CR-SIL)	3.5					0.6
BR 12	Fs (Fullerton CR-SIL)	8.5					59.0
8	Cr (Etowah SIL)	11.5					102.6
8a	SsT (Rock outcrop UWB)	3.5					
6	Cr (Etowah SIL)	11.5					
4	St (Sequatchie FSL)	4.0					8.1

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
17 (B)	2010	9/2/2009	9/1/2010	10.5	Corn silage
	2011	9/2/2010	9/1/2011	10.5	Corn silage
	2012	9/2/2011	9/1/2012	10.6	Corn silage
17 (A)	2010	10/1/2009	9/30/2010	35.7	Tobacco
	2011	10/1/2010	9/30/2011	35.7	Tobacco
	2012	10/1/2011	9/30/2012	35.7	Tobacco
65	2010	9/2/2009	9/1/2010	8.2	Corn silage
	2011	9/2/2010	9/1/2011	8.2	Corn silage
	2012	9/2/2011	9/1/2012	8.2	Corn silage
25	2010	9/11/2009	9/1/2010	0.8	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.4	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.8	Fescue hay maint
7	2010	9/2/2009	9/1/2010	27.2	Corn silage
	2011	9/2/2010	9/1/2011	27.2	Corn silage
	2012	9/2/2011	9/1/2012	27.2	Corn silage
1	2010	9/2/2009	9/1/2010	8.1	Corn silage
	2011	9/2/2010	9/1/2011	8.1	Corn silage

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	9/2/2011	9/1/2012	8.1	Corn silage
3	2010	9/2/2009	9/1/2010	8.1	Corn silage
	2011	9/2/2010	9/1/2011	8.1	Corn silage
	2012	9/2/2011	9/1/2012	8.1	Corn silage
2	2010	9/2/2009	9/1/2010	10.5	Corn silage
	2011	9/2/2010	9/1/2011	10.5	Corn silage
	2012	9/2/2011	9/1/2012	10.5	Corn silage
5	2010	n/a	n/a	n/a	Tobacco
	2011	n/a	n/a	n/a	Tobacco
	2012	n/a	n/a	n/a	Tobacco
40 (c)	2010	9/11/2009	9/1/2010	2.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	1.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	2.8	Fescue hay maint
40 (a)	2010	9/11/2009	9/1/2010	2.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	1.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	2.8	Fescue hay maint
40 (b)	2010	9/11/2009	9/1/2010	0.9	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.5	Fescue hay maint
	2012	9/11/2011	9/10/2012	1.0	Fescue hay maint
10 (b)	2010	9/2/2009	9/1/2010	23.7	Corn silage
	2011	9/2/2010	9/1/2011	23.8	Corn silage
	2012	9/2/2011	9/1/2012	23.7	Corn silage
9	2010	10/1/2009	9/30/2010	70.5	Tobacco
	2011	10/1/2010	9/30/2011	65.0	Tobacco
	2012	10/1/2011	9/30/2012	71.8	Tobacco
10 (a)	2010	9/2/2009	9/1/2010	23.7	Corn silage
	2011	9/2/2010	9/1/2011	23.8	Corn silage
	2012	9/2/2011	9/1/2012	23.7	Corn silage
AW3	2010	9/11/2009	9/1/2010	8.7	Fescue hay maint
	2011	9/2/2010	9/10/2011	4.4	Fescue hay maint

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	9/11/2011	9/10/2012	10.6	Fescue hay maint
AW5	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
AW7	2010	9/11/2009	9/1/2010	1.1	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.6	Fescue hay maint
	2012	9/11/2011	9/10/2012	1.4	Fescue hay maint
AW7 (b)	2010	9/11/2009	9/1/2010	0.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.4	Fescue hay maint
AW7 (a)	2010	9/11/2009	9/1/2010	0.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.4	Fescue hay maint
12	2010	n/a	n/a	n/a	Corn silage
	2011	n/a	n/a	n/a	Corn silage
	2012	n/a	n/a	n/a	Corn grain
AW8	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
28	2010	9/2/2009	9/1/2010	8.2	Corn silage
	2011	9/2/2010	9/1/2011	8.2	Corn silage
	2012	9/2/2011	9/1/2012	8.3	Corn silage
11 (a)	2010	9/2/2009	9/1/2010	31.6	Corn silage
	2011	9/2/2010	9/1/2011	31.6	Corn silage
	2012	9/2/2011	9/1/2012	31.7	Corn silage
11 (b)	2010	9/2/2009	9/1/2010	29.9	Corn silage
	2011	9/2/2010	9/1/2011	29.9	Corn silage
	2012	9/2/2011	9/1/2012	30.0	Corn silage
13 (a)	2010	9/2/2009	9/1/2010	2.9	Corn silage
	2011	9/2/2010	9/1/2011	2.9	Corn silage

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	9/2/2011	9/1/2012	2.9	Corn silage
13 (b)	2010	9/2/2009	9/1/2010	22.2	Corn silage
	2011	9/2/2010	9/1/2011	25.1	Corn silage
	2012	9/2/2011	9/1/2012	23.3	Corn silage
14 (A)	2010	10/1/2009	9/30/2010	77.1	Tobacco
	2011	10/1/2010	9/30/2011	64.0	Tobacco
	2012	10/1/2011	9/30/2012	79.0	Tobacco
14 (B)	2010	9/2/2009	9/1/2010	8.1	Corn silage
	2011	9/2/2010	9/1/2011	8.3	Corn silage
	2012	9/2/2011	9/1/2012	8.2	Corn silage
26	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
15Aa	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
27	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
15Ab	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
29 (B)	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
30	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
31 (b)	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	n/a	n/a	n/a	Corn grain
31 (a)	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
29A	2010	n/a	n/a	n/a	Corn grain
	2011	n/a	n/a	n/a	Corn grain
	2012	n/a	n/a	n/a	Corn grain
18a	2010	9/2/2009	9/1/2010	31.6	Corn silage
	2011	9/2/2010	9/1/2011	31.6	Corn silage
	2012	9/2/2011	9/1/2012	31.6	Corn silage
18b	2010	9/2/2009	9/1/2010	3.1	Corn silage
	2011	9/2/2010	9/1/2011	3.1	Corn silage
	2012	9/2/2011	9/1/2012	3.1	Corn silage
BR9a	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
21	2010	n/a	n/a	n/a	Corn silage
	2011	n/a	n/a	n/a	Corn silage
	2012	n/a	n/a	n/a	Corn grain
BR9b	2010	9/11/2009	9/1/2010	0.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.4	Fescue hay maint
BR9c	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
20A	2010	10/1/2009	9/30/2010	71.8	Tobacco
	2011	10/1/2010	9/30/2011	71.8	Tobacco
	2012	10/1/2011	9/30/2012	71.8	Tobacco
BR4	2010	9/11/2009	9/1/2010	1.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.7	Fescue hay maint

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	9/11/2011	9/10/2012	1.6	Fescue hay maint
20B	2010	9/2/2009	9/1/2010	25.5	Corn silage
	2011	9/2/2010	9/1/2011	25.5	Corn silage
	2012	9/2/2011	9/1/2012	25.6	Corn silage
BR11	2010	9/11/2009	9/1/2010	1.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.7	Fescue hay maint
	2012	9/11/2011	9/10/2012	1.6	Fescue hay maint
34	2010	10/1/2009	9/30/2010	71.8	Tobacco
	2011	10/1/2010	9/30/2011	71.8	Tobacco
	2012	10/1/2011	9/30/2012	71.8	Tobacco
39	2010	n/a	n/a	n/a	Tobacco
	2011	n/a	n/a	n/a	Tobacco
	2012	n/a	n/a	n/a	Tobacco
33	2010	10/1/2009	9/30/2010	71.8	Tobacco
	2011	10/1/2010	9/30/2011	71.8	Tobacco
	2012	10/1/2011	9/30/2012	71.8	Tobacco
38	2010	9/2/2009	9/1/2010	11.0	Corn silage
	2011	9/2/2010	9/1/2011	11.0	Corn silage
	2012	9/2/2011	9/1/2012	10.6	Corn silage
35	2010	10/1/2009	9/30/2010	71.8	Tobacco
	2011	10/1/2010	9/30/2011	71.8	Tobacco
	2012	10/1/2011	9/30/2012	71.8	Tobacco
36	2010	10/1/2009	9/30/2010	79.1	Tobacco
	2011	10/1/2010	9/30/2011	79.1	Tobacco
	2012	10/1/2011	9/30/2012	79.1	Tobacco
37	2010	9/2/2009	9/1/2010	13.9	Corn silage
	2011	9/2/2010	9/1/2011	13.9	Corn silage
	2012	9/2/2011	9/1/2012	14.0	Corn silage
32a	2010	n/a	n/a	n/a	Tobacco
	2011	n/a	n/a	n/a	Tobacco

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	n/a	n/a	n/a	Tobacco
32b	2010	10/1/2009	9/30/2010	27.4	Tobacco
	2011	10/1/2010	9/30/2011	27.4	Tobacco
	2012	10/1/2011	9/30/2012	27.4	Tobacco
WB1b	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
WB1a	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
RE2	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
RE1	2010	n/a	n/a	n/a	Fescue hay maint
	2011	n/a	n/a	n/a	Fescue hay maint
	2012	n/a	n/a	n/a	Fescue hay maint
RE3	2010	9/11/2009	9/1/2010	0.3	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.2	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.4	Fescue hay maint
RE4	2010	9/11/2009	9/1/2010	0.6	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.3	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.7	Fescue hay maint
RE5	2010	9/11/2009	9/1/2010	0.6	Fescue hay maint
	2011	9/2/2010	9/10/2011	0.3	Fescue hay maint
	2012	9/11/2011	9/10/2012	0.7	Fescue hay maint
BR 12	2010	10/1/2009	9/30/2010	59.0	Tobacco
	2011	10/1/2010	9/30/2011	59.0	Tobacco
	2012	10/1/2011	9/30/2012	59.0	Tobacco
8	2010	10/1/2009	9/30/2010	102.6	Tobacco
	2011	10/1/2010	9/30/2011	102.6	Tobacco

Field	Crop Year	Starting Date (mm/dd/yyyy)	Ending Date (mm/dd/yyyy)	Soil Loss (Ton/Ac)	Primary Crop
	2012	10/1/2011	9/30/2012	102.6	Tobacco
8a	2010	n/a	n/a	n/a	Tobacco
	2011	n/a	n/a	n/a	Tobacco
	2012	n/a	n/a	n/a	Tobacco
6	2010	n/a	n/a	n/a	Corn silage
	2011	n/a	n/a	n/a	Corn silage
	2012	n/a	n/a	n/a	Corn silage
4	2010	9/2/2009	9/1/2010	8.1	Corn silage
	2011	9/2/2010	9/1/2011	8.1	Corn silage
	2012	9/2/2011	9/1/2012	8.1	Corn silage

4.3. Nitrogen and Phosphorus Risk Analysis

Risk Assessment for Potential Phosphorous Transport from Fields

The Phosphorus Index is a field-specific assessment tool used to provide a relative value of the field for potential phosphorus transport from the fields. Based on the soil test phosphorus level and the P Index value, nutrients should be land applied on a nitrogen-based, with an estimated 2P removal in harvested biomass, or P removal, or no P application. Any phosphorus application option, including a single application (banking), shall not exceed the recommended nitrogen application rate during the year of application, or not exceed the estimated nitrogen removal n harvested biomass.

Tennessee Phosphorus Index

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
17 (B)	2010	15	4	60	60	Low
17 (B)	2011	15	17	60	255	High
17 (B)	2012	15	18	60	270	High
17 (A)	2010	15	13	15	195	Medium
17 (A)	2011	15	13	15	195	Medium
17 (A)	2012	15	13	15	195	Medium
65	2010	17	22	34	374	Very High
65	2011	17	2	34	34	Low
65	2012	17	2	34	34	Low
25	2010	13	23	13	299	High
25	2011	13	23	13	299	High
25	2012	13	23	13	299	High
7	2010	21	4	84	84	Low
7	2011	21	4	84	84	Low
7	2012	21	4	84	84	Low
1	2010	13	4	52	52	Low
1	2011	13	4	52	52	Low
1	2012	13	4	52	52	Low
3	2010	13	4	52	52	Low
3	2011	13	4	52	52	Low

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
3	2012	13	4	52	52	Low
2	2010	15	4	60	60	Low
2	2011	15	4	60	60	Low
2	2012	15	4	60	60	Low
5	2010	15	16	60	240	High
5	2011	15	16	60	240	High
5	2012	15	16	60	240	High
40 (c)	2010	13	17	13	221	High
40 (c)	2011	13	17	13	221	High
40 (c)	2012	13	17	13	221	High
40 (a)	2010	13	17	13	221	High
40 (a)	2011	13	17	13	221	High
40 (a)	2012	13	17	13	221	High
40 (b)	2010	13	17	13	221	High
40 (b)	2011	13	17	13	221	High
40 (b)	2012	13	17	13	221	High
10 (b)	2010	19	4	76	76	Low
10 (b)	2011	19	4	76	76	Low
10 (b)	2012	19	25	76	475	Very High
9	2010	19	13	19	247	High
9	2011	19	17	19	323	Very High
9	2012	19	1	19	19	Low
10 (a)	2010	19	4	76	76	Low
10 (a)	2011	19	4	76	76	Low
10 (a)	2012	19	25	76	475	Very High
AW3	2010	13	23	13	299	High
AW3	2011	13	23	13	299	High
AW3	2012	13	23	13	299	High
AW5	2010	13	23	13	299	High

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
AW5	2011	13	23	13	299	High
AW5	2012	13	23	13	299	High
AW7	2010	13	23	13	299	High
AW7	2011	13	23	13	299	High
AW7	2012	13	23	13	299	High
AW7 (b)	2010	19	23	19	437	Very High
AW7 (b)	2011	19	23	19	437	Very High
AW7 (b)	2012	19	23	19	437	Very High
AW7 (a)	2010	19	23	19	437	Very High
AW7 (a)	2011	19	23	19	437	Very High
AW7 (a)	2012	19	23	19	437	Very High
12	2010	19	4	76	76	Low
12	2011	19	4	76	76	Low
12	2012	19	4	76	76	Low
AW8	2010	19	23	19	437	Very High
AW8	2011	19	23	19	437	Very High
AW8	2012	19	23	19	437	Very High
28	2010	17	4	68	68	Low
28	2011	17	4	68	68	Low
28	2012	17	4	68	68	Low
11 (a)	2010	19	2	38	38	Low
11 (a)	2011	19	2	38	38	Low
11 (a)	2012	19	17	38	323	Very High
11 (b)	2010	19	2	38	38	Low
11 (b)	2011	19	2	38	38	Low
11 (b)	2012	19	2	38	38	Low
13 (a)	2010	13	2	26	26	Low
13 (a)	2011	13	22	26	286	High
13 (a)	2012	13	2	26	26	Low

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
13 (b)	2010	21	23	42	483	Very High
13 (b)	2011	21	2	42	42	Low
13 (b)	2012	21	12	42	252	High
14 (A)	2010	21	33	21	693	Very High
14 (A)	2011	21	32	21	672	Very High
14 (A)	2012	21	33	21	693	Very High
14 (B)	2010	17	17	68	289	High
14 (B)	2011	17	25	68	425	Very High
14 (B)	2012	17	4	68	68	Low
26	2010	19	4	76	76	Low
26	2011	19	23	76	437	Very High
26	2012	19	4	76	76	Low
15Aa	2010	20	4	80	80	Low
15Aa	2011	20	23	80	460	Very High
15Aa	2012	20	4	80	80	Low
27	2010	15	4	60	60	Low
27	2011	15	4	60	60	Low
27	2012	15	4	60	60	Low
15Ab	2010	20	4	80	80	Low
15Ab	2011	20	24	80	480	Very High
15Ab	2012	20	4	80	80	Low
29 (B)	2010	20	4	80	80	Low
29 (B)	2011	20	4	80	80	Low
29 (B)	2012	20	4	80	80	Low
30	2010	19	4	76	76	Low
30	2011	19	4	76	76	Low
30	2012	19	4	76	76	Low
31 (b)	2010	13	4	52	52	Low
31 (b)	2011	13	4	52	52	Low

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
31 (b)	2012	13	4	52	52	Low
31 (a)	2010	17	4	68	68	Low
31 (a)	2011	17	4	68	68	Low
31 (a)	2012	17	4	68	68	Low
29A	2010	17	4	68	68	Low
29A	2011	17	4	68	68	Low
29A	2012	17	4	68	68	Low
18a	2010	19	4	76	76	Low
18a	2011	19	4	76	76	Low
18a	2012	19	4	76	76	Low
18b	2010	19	4	76	76	Low
18b	2011	19	26	76	494	Very High
18b	2012	19	4	76	76	Low
BR9a	2010	19	23	19	437	Very High
BR9a	2011	19	23	19	437	Very High
BR9a	2012	19	23	19	437	Very High
21	2010	19	4	76	76	Low
21	2011	19	25	76	475	Very High
21	2012	19	4	76	76	Low
BR9b	2010	19	23	19	437	Very High
BR9b	2011	19	23	19	437	Very High
BR9b	2012	19	23	19	437	Very High
BR9c	2010	19	23	19	437	Very High
BR9c	2011	19	23	19	437	Very High
BR9c	2012	19	23	19	437	Very High
20A	2010	19	4	76	76	Low
20A	2011	19	4	76	76	Low
20A	2012	19	4	76	76	Low
BR4	2010	13	23	13	299	High

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
BR4	2011	13	23	13	299	High
BR4	2012	13	23	13	299	High
20B	2010	21	4	84	84	Low
20B	2011	21	4	84	84	Low
20B	2012	21	4	84	84	Low
BR11	2010	13	23	13	299	High
BR11	2011	13	23	13	299	High
BR11	2012	13	23	13	299	High
34	2010	19	14	38	266	High
34	2011	19	14	38	266	High
34	2012	19	14	38	266	High
39	2010	19	13	19	247	High
39	2011	19	13	19	247	High
39	2012	19	13	19	247	High
33	2010	19	13	19	247	High
33	2011	19	13	19	247	High
33	2012	19	13	19	247	High
38	2010	19	4	76	76	Low
38	2011	19	4	76	76	Low
38	2012	19	15	76	285	High
35	2010	19	14	38	266	High
35	2011	19	14	38	266	High
35	2012	19	14	38	266	High
36	2010	21	4	84	84	Low
36	2011	21	4	84	84	Low
36	2012	21	4	84	84	Low
37	2010	19	4	76	76	Low
37	2011	19	4	76	76	Low
37	2012	19	24	76	456	Very High

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
32a	2010	19	16	76	304	Very High
32a	2011	19	16	76	304	Very High
32a	2012	19	16	76	304	Very High
32b	2010	17	16	68	272	High
32b	2011	17	16	68	272	High
32b	2012	17	16	68	272	High
WB1b	2010	15	23	15	345	Very High
WB1b	2011	15	23	15	345	Very High
WB1b	2012	15	23	15	345	Very High
WB1a	2010	15	23	15	345	Very High
WB1a	2011	15	23	15	345	Very High
WB1a	2012	15	23	15	345	Very High
RE2	2010	13	23	13	299	High
RE2	2011	13	23	13	299	High
RE2	2012	13	23	13	299	High
RE1	2010	15	4	60	60	Low
RE1	2011	15	4	60	60	Low
RE1	2012	15	4	60	60	Low
RE3	2010	15	23	15	345	Very High
RE3	2011	15	23	15	345	Very High
RE3	2012	15	23	15	345	Very High
RE4	2010	15	23	15	345	Very High
RE4	2011	15	23	15	345	Very High
RE4	2012	15	23	15	345	Very High
RE5	2010	15	4	60	60	Low
RE5	2011	15	4	60	60	Low
RE5	2012	15	4	60	60	Low
BR 12	2010	19	53	19	1,007	Very High
BR 12	2011	19	53	19	1,007	Very High

Field	Crop Year	Site and Transport Factor	Mgmt. and Source Factor	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk
BR 12	2012	19	53	19	1,007	Very High
8	2010	22	4	88	88	Low
8	2011	22	4	88	88	Low
8	2012	22	4	88	88	Low
8a	2010	21	4	84	84	Low
8a	2011	21	4	84	84	Low
8a	2012	21	4	84	84	Low
6	2010	19	8	152	152	Medium
6	2011	19	8	152	152	Medium
6	2012	19	8	152	152	Medium
4	2010	16	8	128	128	Medium
4	2011	16	8	128	128	Medium
4	2012	16	8	128	128	Medium

Assessment Procedure

Field	Distance to Water (Feet)	Slope Length (Feet)	Buffer Width (Feet)	Tillage/Cover Type
17 (B)	1,200		None	Bare soil or Conventional tillage
17 (A)	1,000		None	No-till w/ light to medium residues
65	1,420		None	No-till w/ light to medium residues
25	30		None	Pasture/Hay
7	60		None	No-till w/ light to medium residues
1	40		None	No-till w/ light to medium residues
3	30		None	No-till w/ light to medium residues
2	280		None	No-till w/ light to medium residues
5	150		None	Bare soil or Conventional tillage
40 (c)	1,230		None	Pasture/Hay
40 (a)	800		None	Pasture/Hay
40 (b)	175		None	Pasture/Hay
10 (b)	285		None	No-till w/ light to medium residues

Field	Distance to Water (Feet)	Slope Length (Feet)	Buffer Width (Feet)	Tillage/Cover Type
9	450		None	Bare soil or Conventional tillage
10 (a)	650		None	No-till w/ light to medium residues
AW3	30		None	Pasture/Hay
AW5	30		None	Pasture/Hay
AW7	30		None	Pasture/Hay
AW7 (b)	30		None	Pasture/Hay
AW7 (a)	30		None	Pasture/Hay
12	30		None	No-till w/ light to medium residues
AW8	30		None	Pasture/Hay
28	3,200		None	No-till w/ light to medium residues
11 (a)	150		None	No-till w/ light to medium residues
11 (b)	180		None	No-till w/ light to medium residues
13 (a)	30		None	No-till w/ light to medium residues
13 (b)	30		None	No-till w/ light to medium residues
14 (A)	3,200		None	Bare soil or Conventional tillage
14 (B)	3,200		None	No-till w/ light to medium residues
26	240		None	No-till w/ light to medium residues
15Aa	0		None	No-till w/ light to medium residues
27	50		None	No-till w/ light to medium residues
15Ab	0		None	No-till w/ light to medium residues
29 (B)	0		None	No-till w/ light to medium residues
30	490		None	No-till w/ light to medium residues
31 (b)	30		None	No-till w/ light to medium residues
31 (a)	30		None	No-till w/ light to medium residues
29A	30		None	No-till w/ light to medium residues
18a	30		None	No-till w/ light to medium residues
18b	30		None	No-till w/ light to medium residues
BR9a	30		None	Pasture/Hay
21	60		None	No-till w/ light to medium residues
BR9b	30		None	Pasture/Hay

Field	Distance to Water (Feet)	Slope Length (Feet)	Buffer Width (Feet)	Tillage/Cover Type
BR9c	60		None	Pasture/Hay
20A	300		None	Bare soil or Conventional tillage
BR4	85		None	Pasture/Hay
20B	30		None	No-till w/ light to medium residues
BR11	1,100		None	Pasture/Hay
34	1,280		None	Bare soil or Conventional tillage
39	950		None	Bare soil or Conventional tillage
33	700		None	Bare soil or Conventional tillage
38	50		None	No-till w/ light to medium residues
35	1,920		None	Bare soil or Conventional tillage
36	50		None	Bare soil or Conventional tillage
37	590		None	No-till w/ light to medium residues
32a	50		None	Bare soil or Conventional tillage
32b	50		None	Bare soil or Conventional tillage
WB1b	500		None	Pasture/Hay
WB1a	1,100		None	Pasture/Hay
RE2	960		None	Pasture/Hay
RE1	440		None	Pasture/Hay
RE3	63		None	Pasture/Hay
RE4	30		None	No-till w/ heavy residues
RE5	30		None	Pasture/Hay
BR 12	130		None	Bare soil or Conventional tillage
8	17		None	Bare soil or Conventional tillage
8a	84		None	Bare soil or Conventional tillage
6	260		None	No-till w/ light to medium residues
4	18		None	No-till w/ light to medium residues

Section 5. Nutrient Management

The goal of this section is to develop a nutrient budget for nitrogen, phosphorus, and potassium that includes all nutrient sources. From this nutrient budget, projections will be made concerning the sustainability of the plan for the entire crop sequence. In most cases, the nutrient budget is accurate for the first year only. If nutrients from sources not included in this plan are used in the first year, the nutrient budget will be revised to account for those inputs. In subsequent years considered in this plan, a nutrient budget will be developed using current soil analysis data; current manure analysis data; the actual crops to be used and their projected yields and nutrient needs and will account for nutrients from all sources. Guidance in developing a nutrient budget may be obtained from your NRCS Field Office or your University of Tennessee Cooperative Extension Service Agent. Land application procedures must be planned and implemented in a way that minimizes potential adverse impacts to the environment and public health.

If land is included in the future for application that is not under the ownership/control of the producer, appropriate agreements will be obtained.

5.1. Field Information

Field ID	Sub-field ID	Total Acres	Spreadable Acres	FSA Farm	FSA Tract	FSA Field	County	Predominant Soil Type	Slope (%)
17	B	23.5	23.5				Claiborne	Crg (Etowah SIL)	
17	A	5.0	5.0				Claiborne	Crg (Etowah SIL)	
65		67.1	67.1				Claiborne	Ts (Talbott SIL)	
25		24.5	24.4				Claiborne	Crg (Etowah SIL)	
7		8.8	8.8				Claiborne	Ssr (Sequoia SICL)	
1		6.9	6.3				Claiborne	St (Squatchie FSL)	
3		7.6	7.5				Claiborne	St (Squatchie FSL)	
2		8.9	8.9				Claiborne	Crg (Etowah SIL)	
5		12.1	12.1				Claiborne	Crg (Etowah SIL)	
40	c	15.5	15.5				Claiborne	Cr (Etowah SIL)	
40	a	44.6	44.6				Claiborne	Cr (Etowah SIL)	
40	b	17.9	17.9				Claiborne	Crg (Etowah SIL)	
10	b	6.4	6.4				Claiborne	Dwr (Dewey SICL)	
9		6.9	6.9				Claiborne	Dwr (Dewey SICL)	
10	a	22.0	22.0				Claiborne	Dwr (Dewey SICL)	
AW3		5.8	4.6				Claiborne	Ccz (Clarksville CR-SIL)	
AW5		26.9	26.5				Claiborne	Dwt (Dewey SICL)	
AW7		3.0	2.7				Claiborne	Ecr (Etowah SICL)	
AW7	b	2.7	2.6				Claiborne	MI (Melvin SIL)	

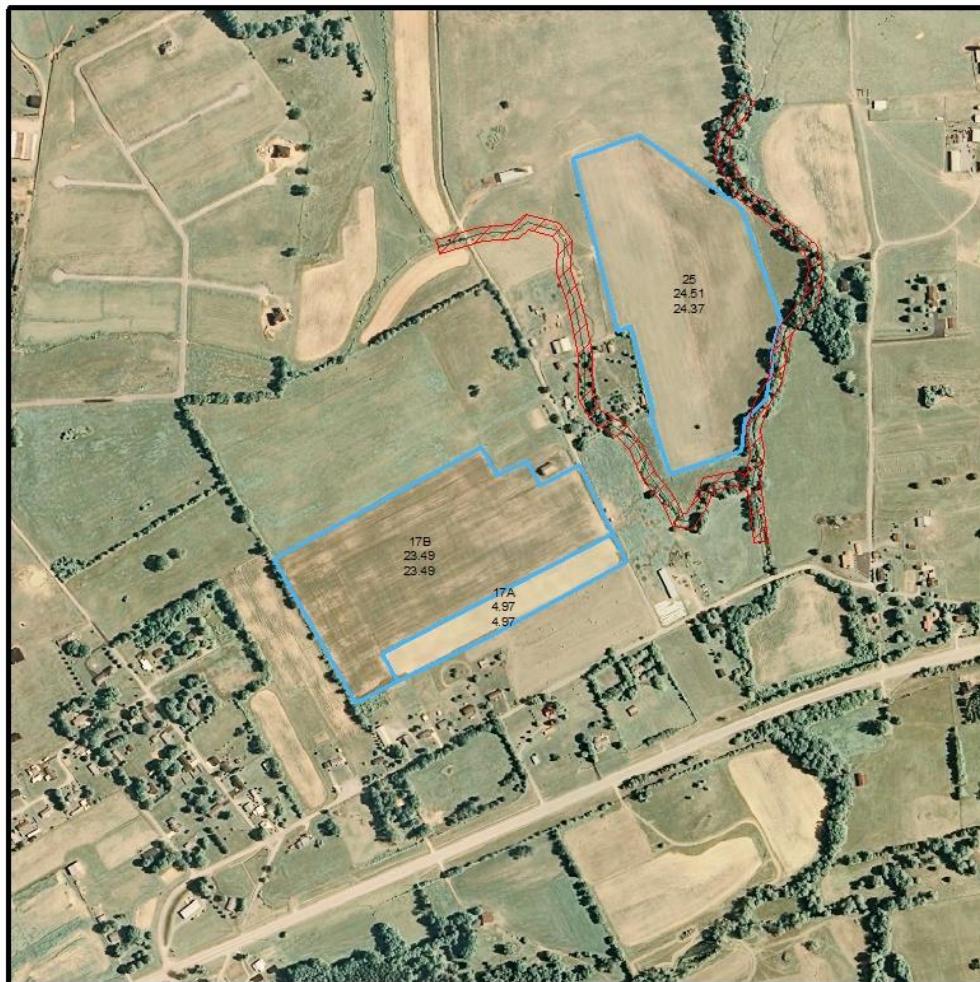
Field ID	Sub-field ID	Total Acres	Spreadable Acres	FSA Farm	FSA Tract	FSA Field	County	Predominant Soil Type	Slope (%)
AW7	a	1.9	1.6				Claiborne	MI (Melvin SIL)	
12		15.8	15.7				Claiborne	Ecr (Etowah SICL)	
AW8		16.5	16.5				Claiborne	RIT (Rock outcrop UWB)	
28		10.7	10.7				Claiborne	Ts (Talbott SIL)	
11	a	26.5	26.5				Claiborne	Cr (Etowah SIL)	
11	b	1.4	1.4				Claiborne	Stx (Holston FSL)	
13	a	18.5	18.0				Claiborne	Pf (Philo SL)	
13	b	5.8	5.8				Claiborne	Tcr (Talbott SICL)	
14	A	10.9	10.9				Claiborne	Tcr (Talbott SICL)	
14	B	14.7	14.7				Claiborne	Ts (Talbott SIL)	
26		6.7	6.7				Claiborne	Cr (Etowah SIL)	
15Aa		6.2	5.1				Claiborne	Pf (Philo SL)	
27		5.8	5.8				Claiborne	Crg (Etowah SIL)	
15Ab		4.8	4.3				Claiborne	St (Squatchie FSL)	
29	B	6.9	5.7				Claiborne	St (Squatchie FSL)	
30		9.0	9.0				Claiborne	Cr (Etowah SIL)	
31	b	3.9	3.7				Claiborne	St (Squatchie FSL)	
31	a	6.7	6.0				Claiborne	Tl (Roane CR-SIL)	
29A		14.6	14.6				Claiborne	Tl (Roane CR-SIL)	
18a		8.2	7.8				Claiborne	Cr (Etowah SIL)	
18b		4.6	4.3				Claiborne	MI (Melvin SIL)	
BR9a		57.1	55.2				Claiborne	RIT (Rock outcrop UWB)	
21		3.3	3.3				Claiborne	MI (Melvin SIL)	
BR9b		57.1	52.8				Claiborne	MI (Melvin SIL)	
BR9c		31.7	30.8				Claiborne	RIT (Rock outcrop UWB)	
20A		16.0	16.0				Claiborne	Dwr (Dewey SICL)	
BR4		6.1	6.1				Claiborne	Fs (Fullerton CR-SIL)	
20B		26.7	26.5				Claiborne	Tcr (Talbott SICL)	
BR11		5.2	5.2				Claiborne	Fc (Fullerton CR-SIL)	
34		12.8	12.8				Claiborne	Dwr (Dewey SICL)	
39		10.8	10.8				Claiborne	Dwt (Dewey SICL)	

Field ID	Sub-field ID	Total Acres	Spreadable Acres	FSA Farm	FSA Tract	FSA Field	County	Predominant Soil Type	Slope (%)
33		8.4	8.4				Claiborne	Dwr (Dewey SICL)	
38		35.8	35.8				Claiborne	Ds (Dewey SIL)	
35		5.4	5.4				Claiborne	Dwr (Dewey SICL)	
36		9.9	9.9				Claiborne	Tcr (Talbott SICL)	
37		11.5	11.5				Claiborne	Es (Etowah SIL)	
32a		9.5	9.0				Claiborne	Ho (Holston FSL)	
32b		22.3	20.5				Claiborne	Ts (Talbott SIL)	
WB1b		30.0	30.0				Claiborne	Tcr (Talbott SICL)	
WB1a		48.0	48.0				Claiborne	Tcr (Talbott SICL)	
RE2		34.3	34.3				Claiborne	Dwr (Dewey SICL)	
RE1		25.4	25.4				Claiborne	TI (Roane CR-SIL)	
RE3		8.4	8.4				Claiborne	LI (Lindside SIL)	
RE4		4.7	4.7				Claiborne	TI (Roane CR-SIL)	
RE5		2.7	2.7				Claiborne	TI (Roane CR-SIL)	
BR 12		4.0	3.9				Claiborne	Fs (Fullerton CR-SIL)	
8		8.8	8.3				Claiborne	Cr (Etowah SIL)	
8a		1.2	1.2				Claiborne	SsT (Rock outcrop UWB)	
6		11.3	11.3				Claiborne	Cr (Etowah SIL)	
4		7.8	7.5				Claiborne	St (Sequatchie FSL)	

County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 1

Date: 10/15/09

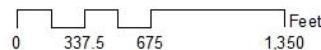


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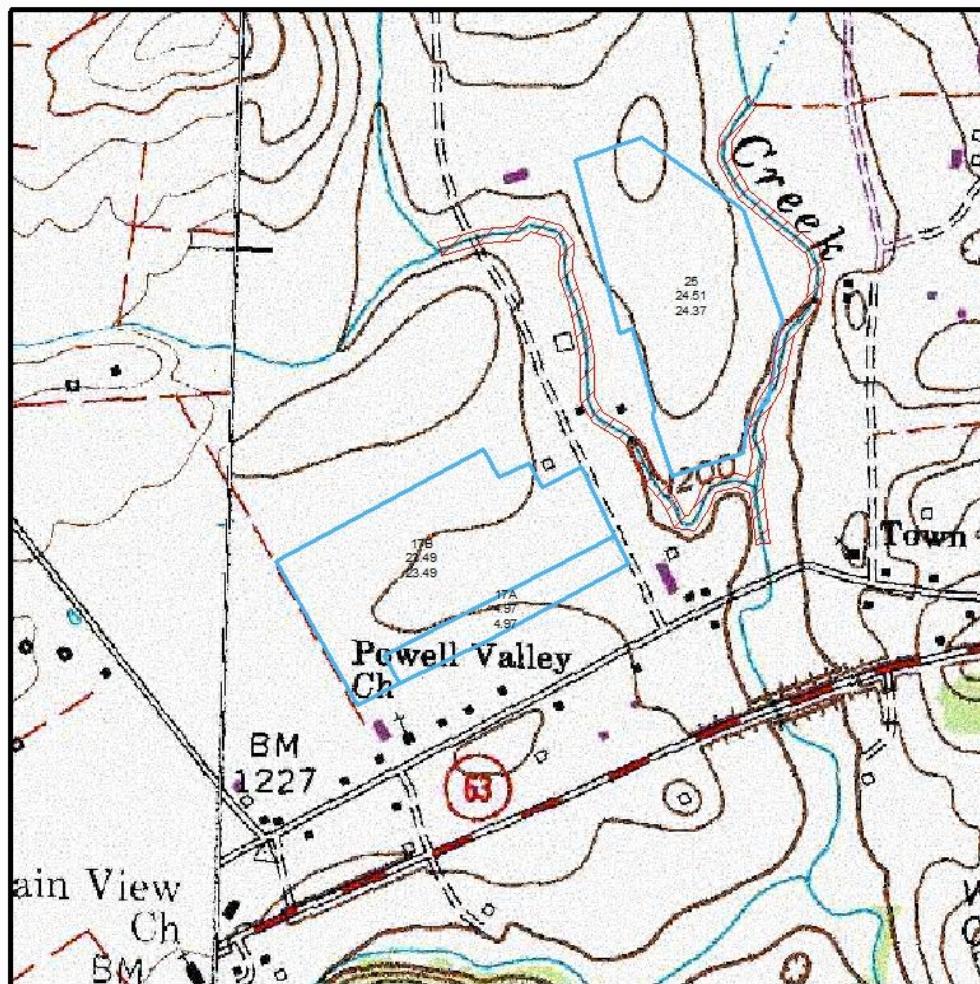
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 1

Date: 10/15/09



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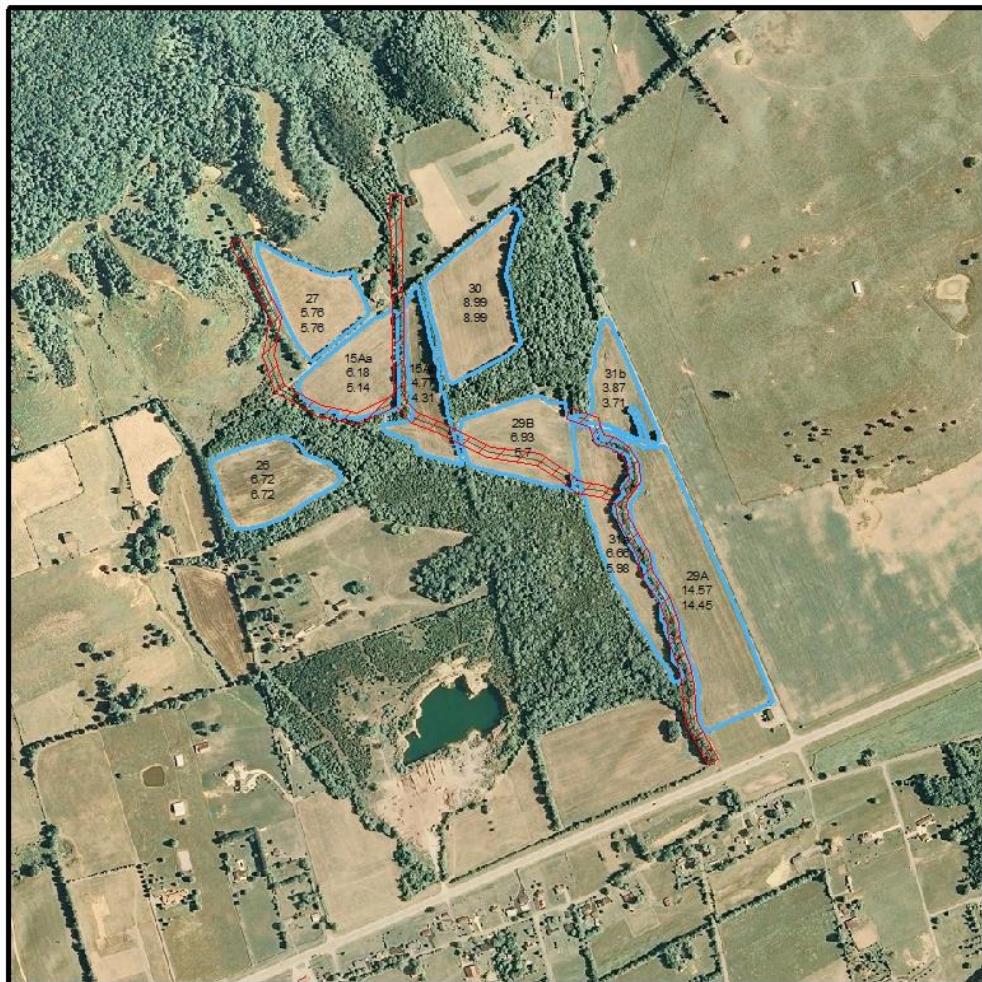
Validus Services LLC

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County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 2

Date: 10/15/09

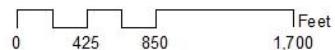


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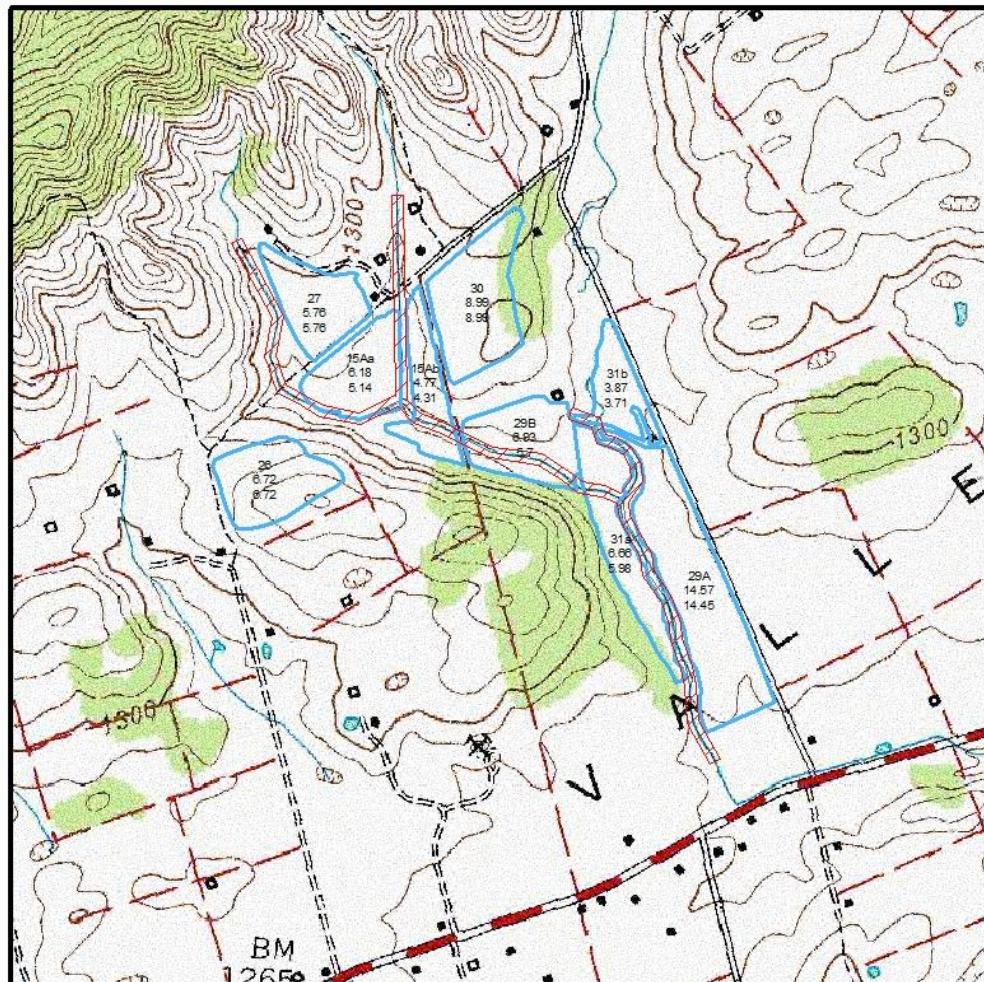
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 2

Date: 10/15/09

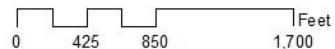


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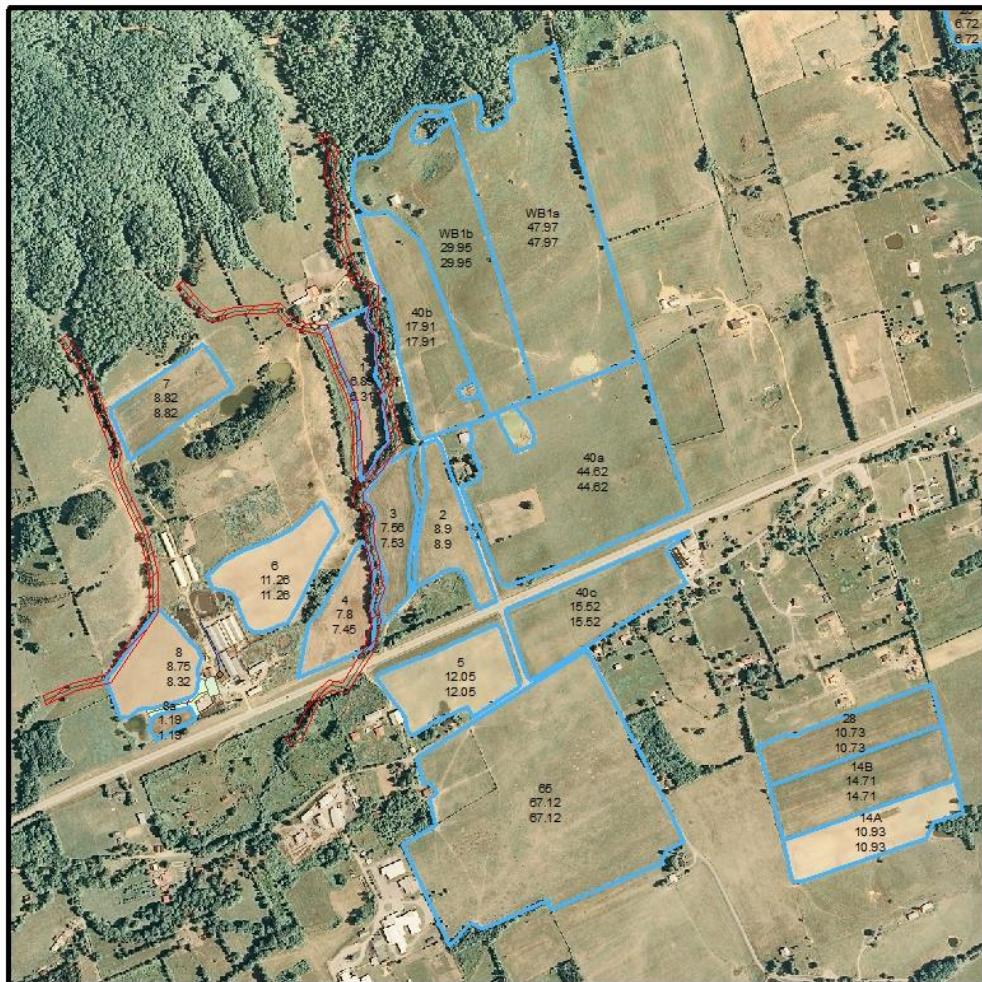
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 3

Date: 10/15/09



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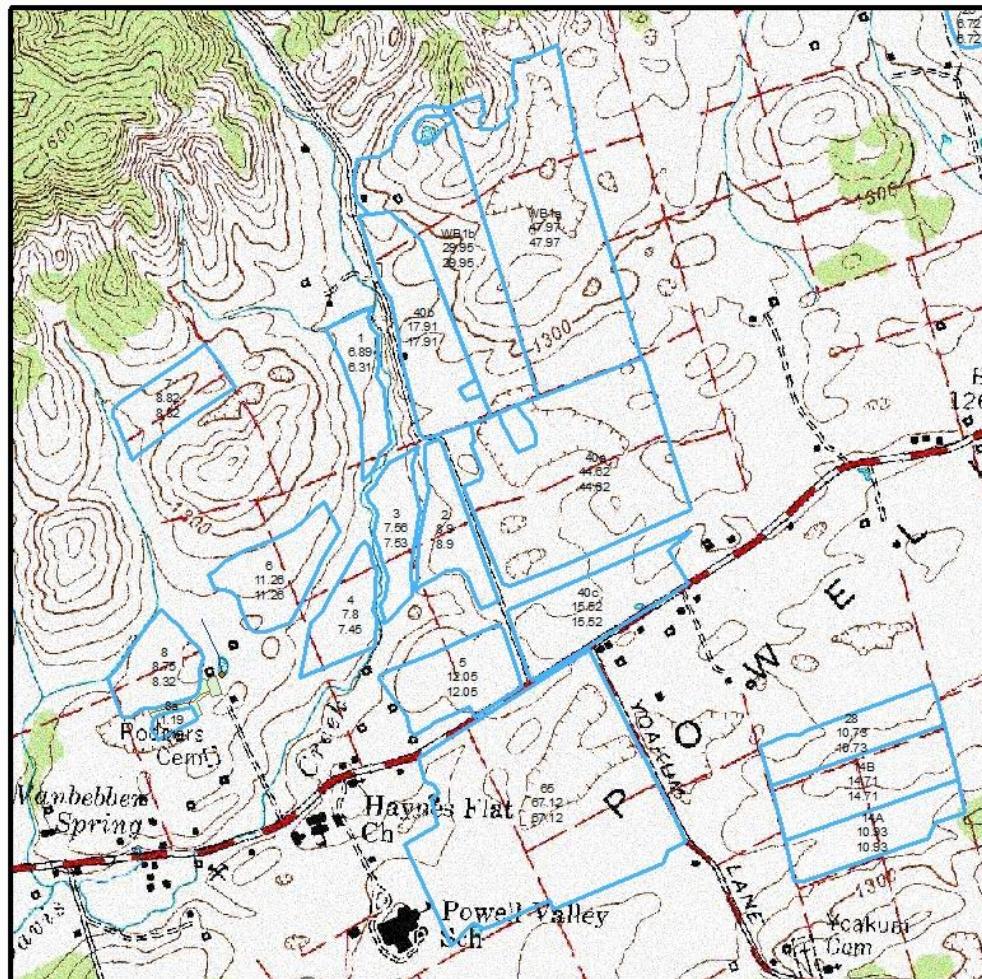
Validus Services LLC

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County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 3

Date: 10/15/09



Legend

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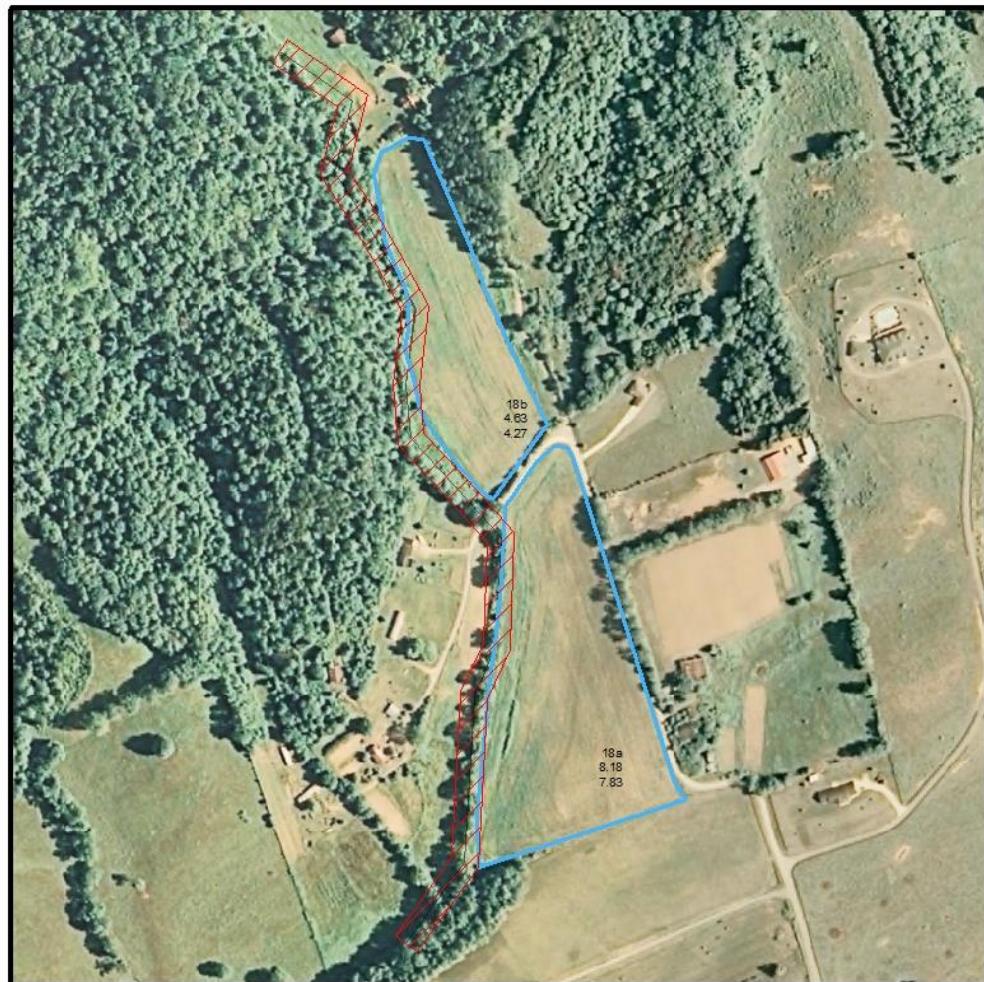
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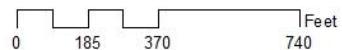
County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 4

Date: 10/15/09



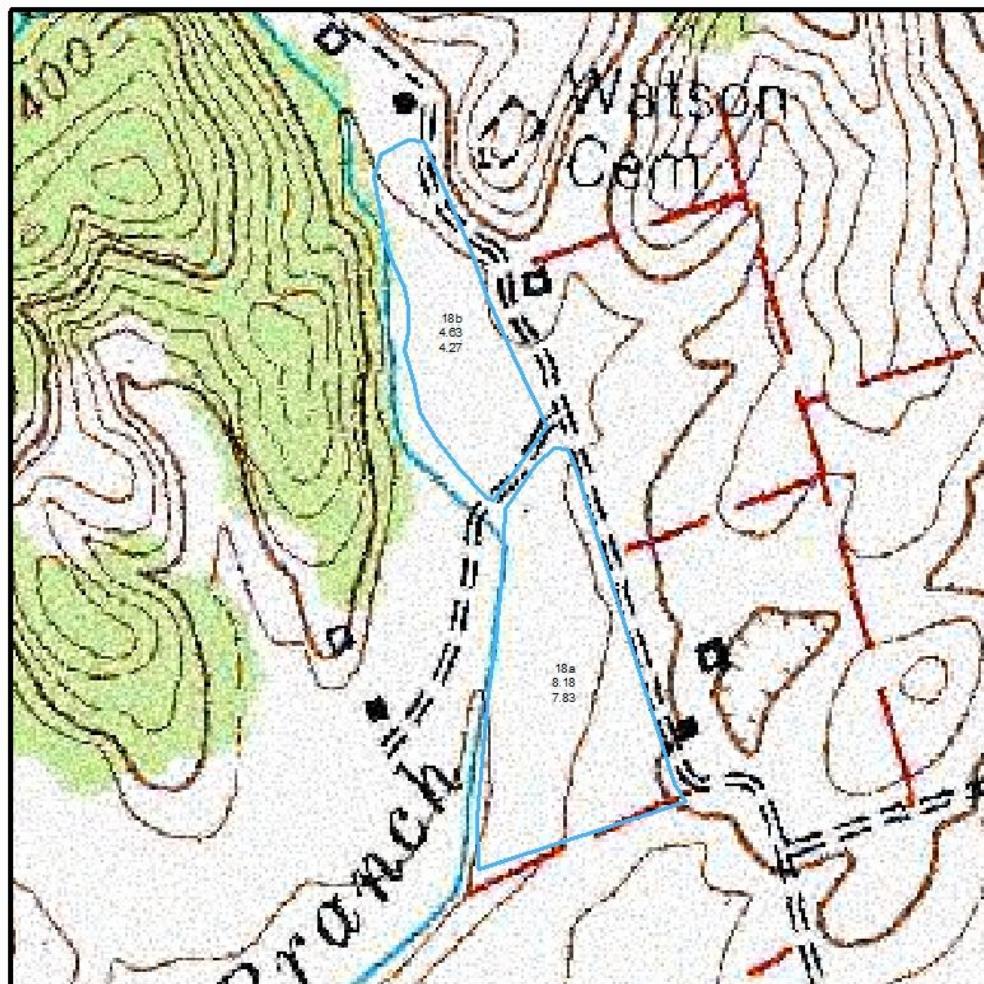
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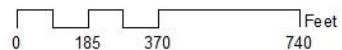
County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 4

Date: 10/15/09



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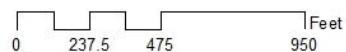
County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 5

Date: 10/15/09



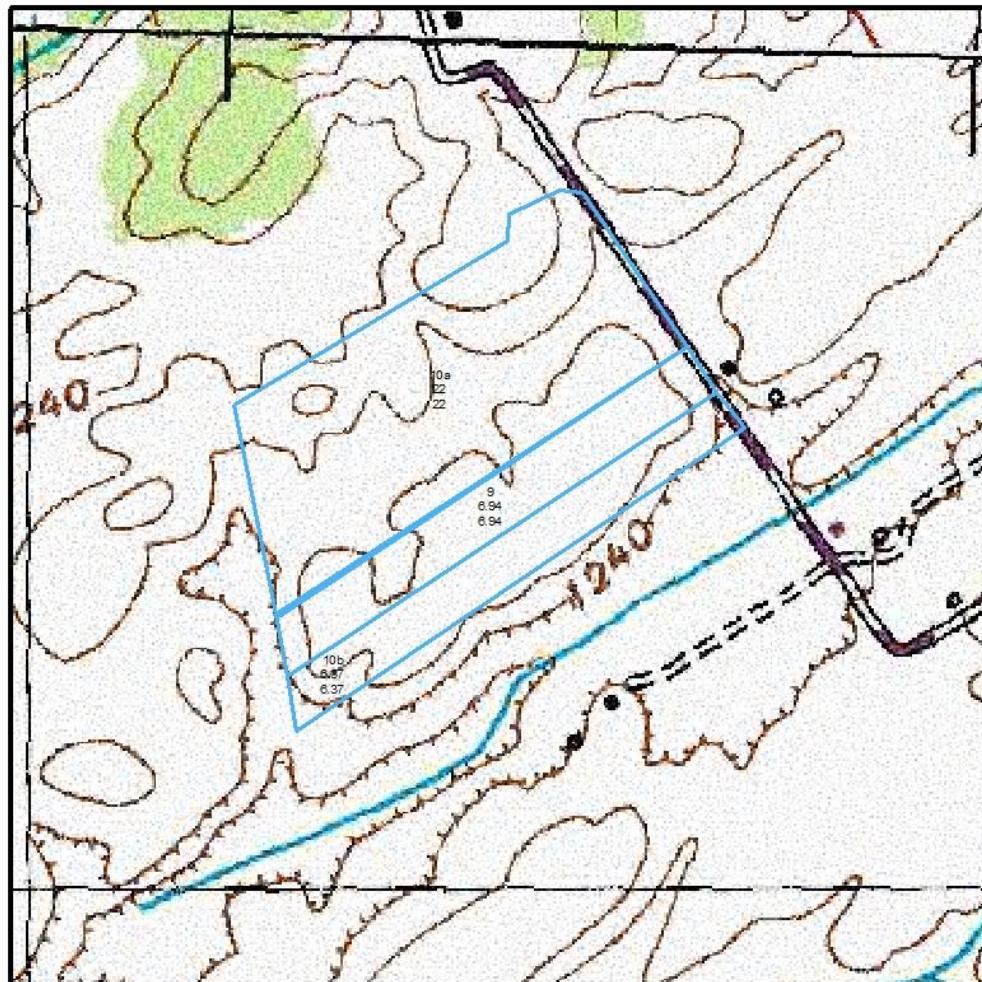
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County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 5

Date: 10/15/09



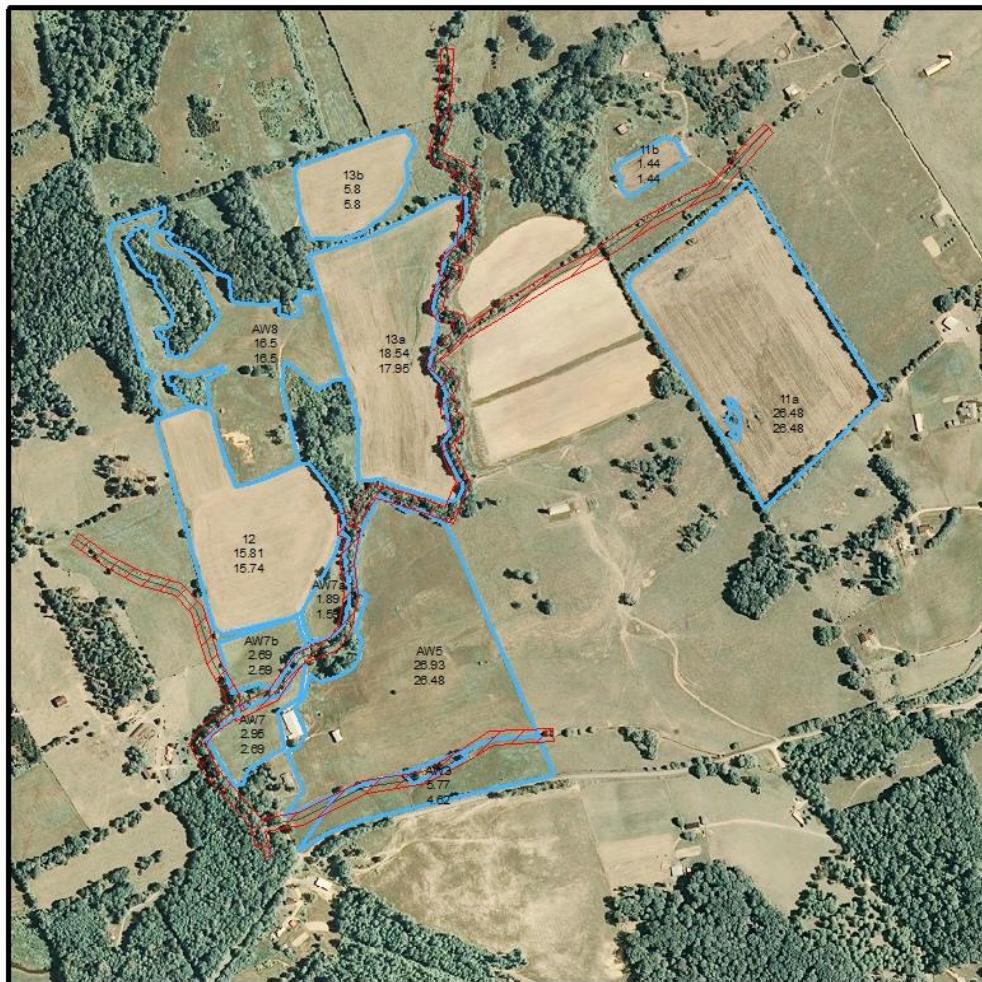
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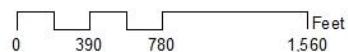
County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 6

Date: 10/15/09



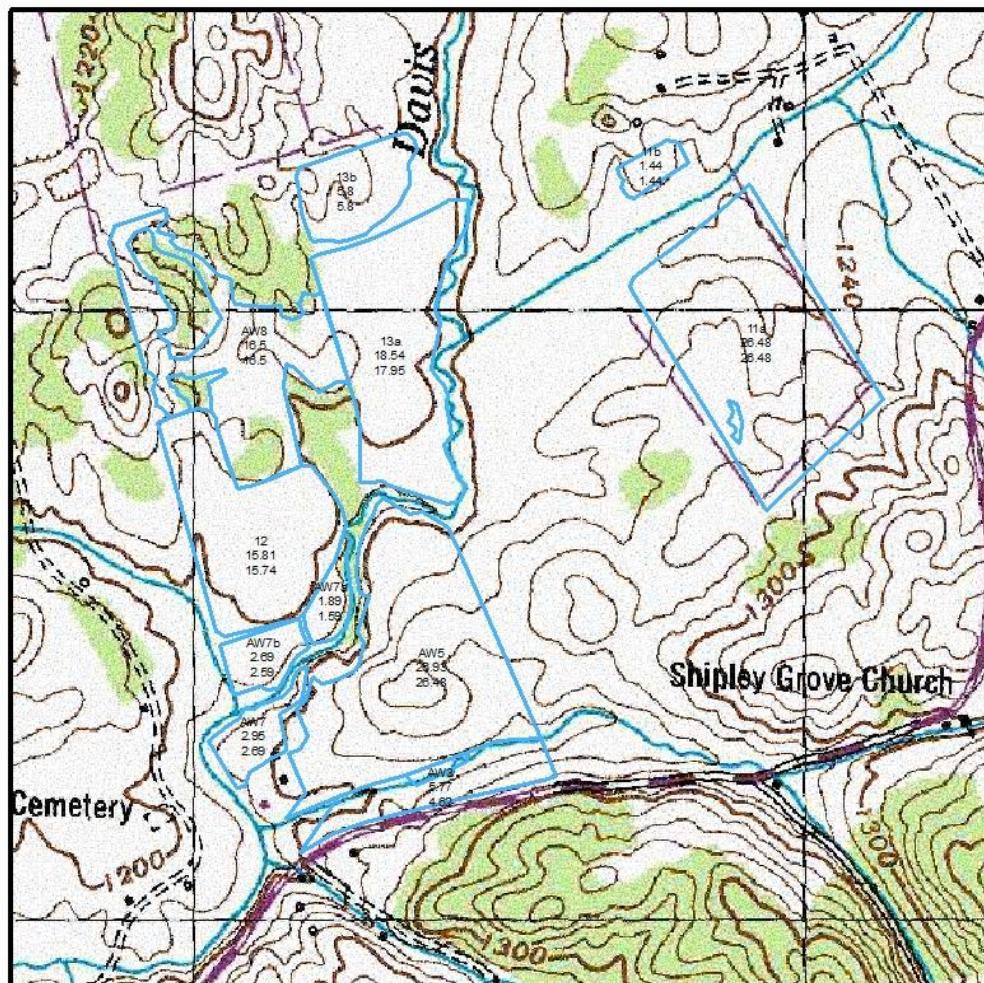
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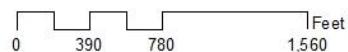
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State: Tennessee

Hickory Corner Dairy Topo 6

Date: 10/15/09



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County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 7

Date: 10/15/09

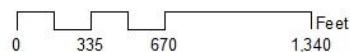


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- SNMP_Fields (blue outline)
- SNMP_Setbacks (dark grey line)



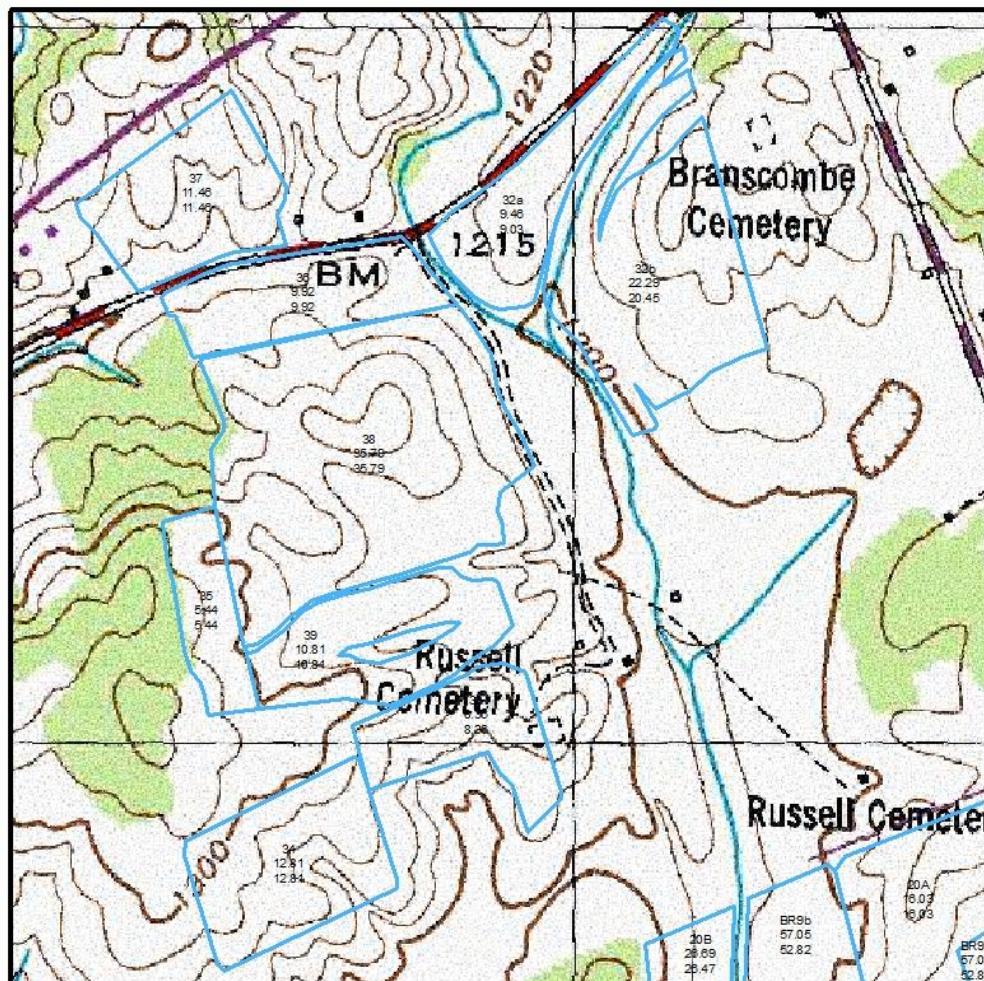
Validus Services LLC



County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 7

Date: 10/15/09



Legend

SNMP_Fields



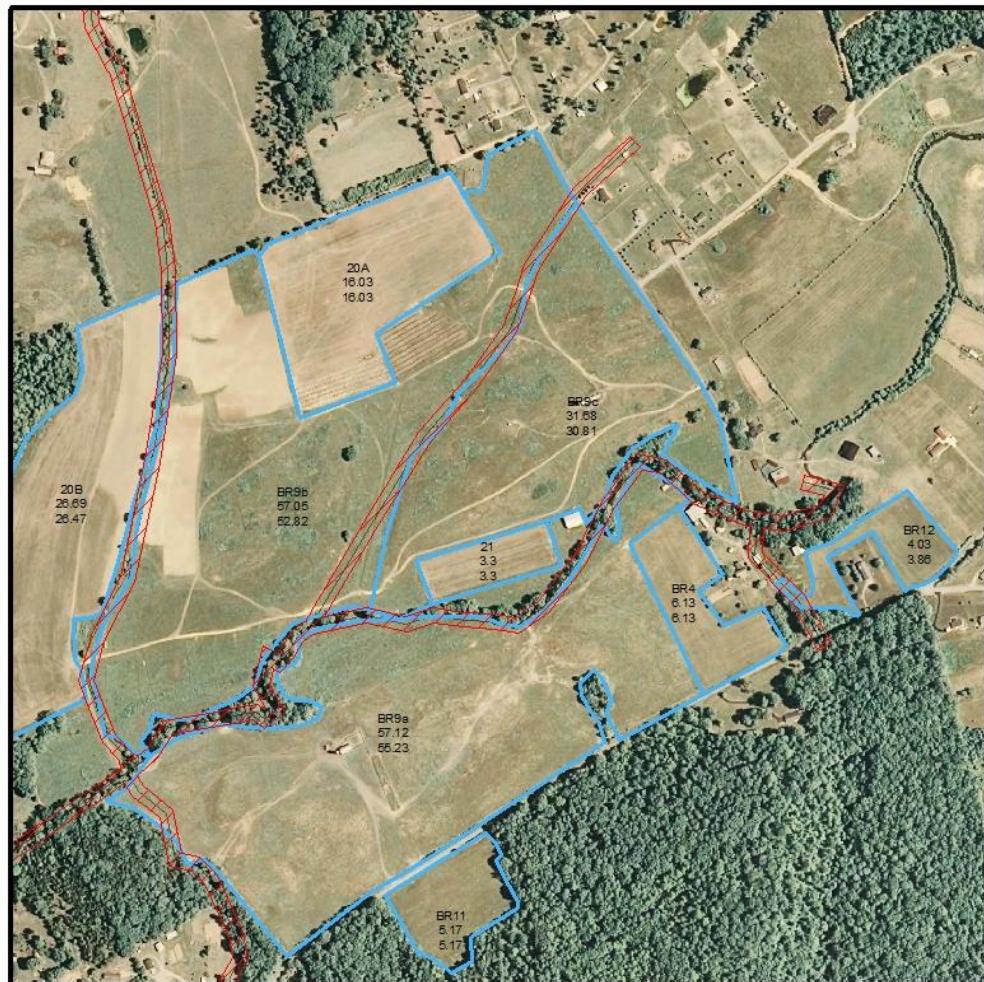
Validus Services LLC

0 335 670 1,340 Feet

County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 8

Date: 10/15/09

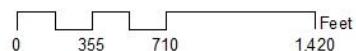


Legend

- SNMP_Fields (Blue Box)
- SNMP_Setbacks (Dark Gray Box)



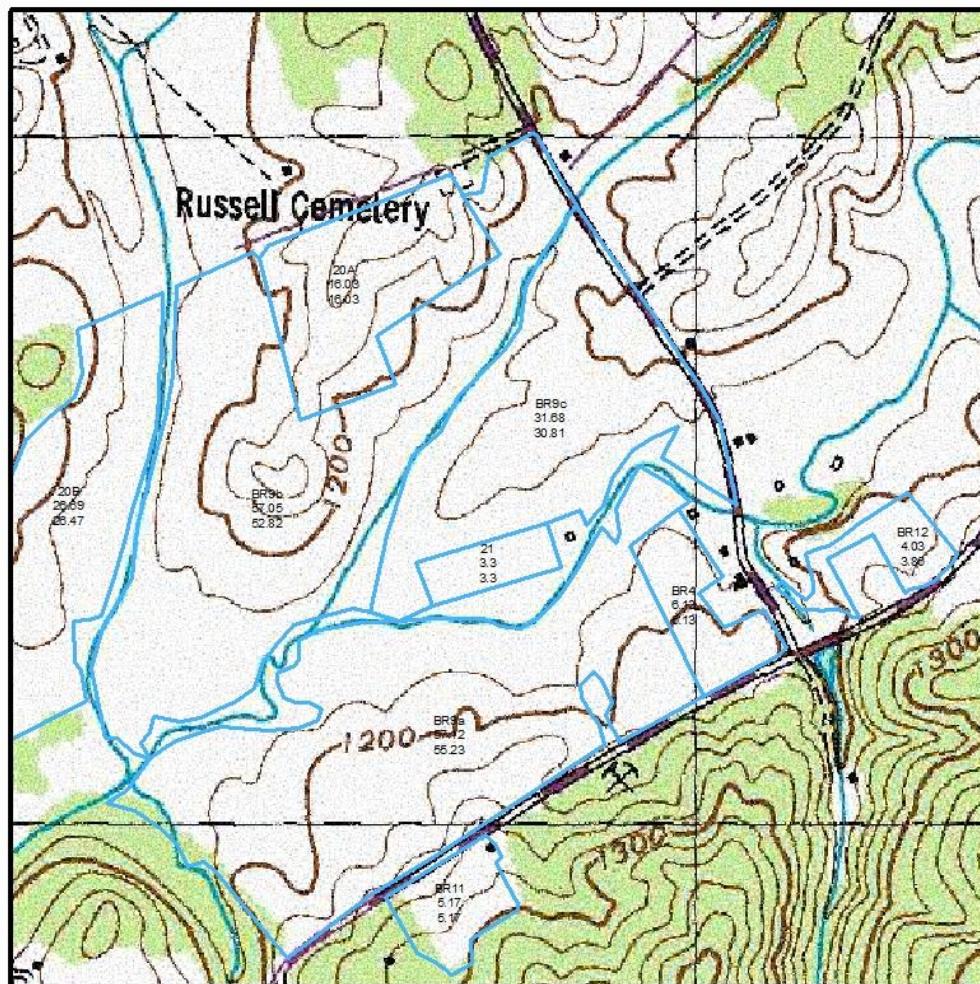
Validus Services LLC



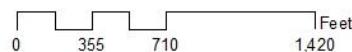
County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 8

Date: 10/15/09



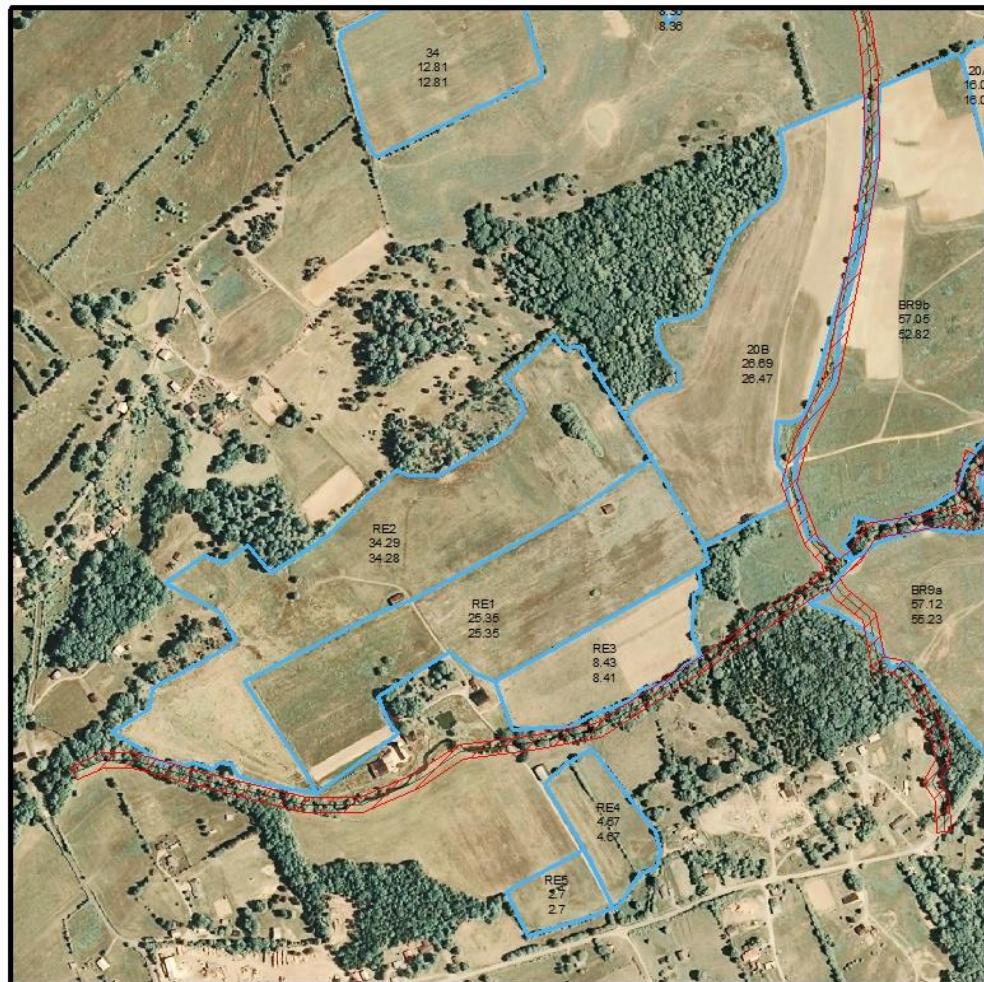
Validus Services LLC



County: Claiborne
State: Tennessee

Hickory Corner Dairy Land App 9

Date: 10/15/09

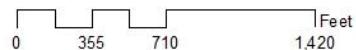


Legend

- SNMP_Fields
- SNMP_Setbacks



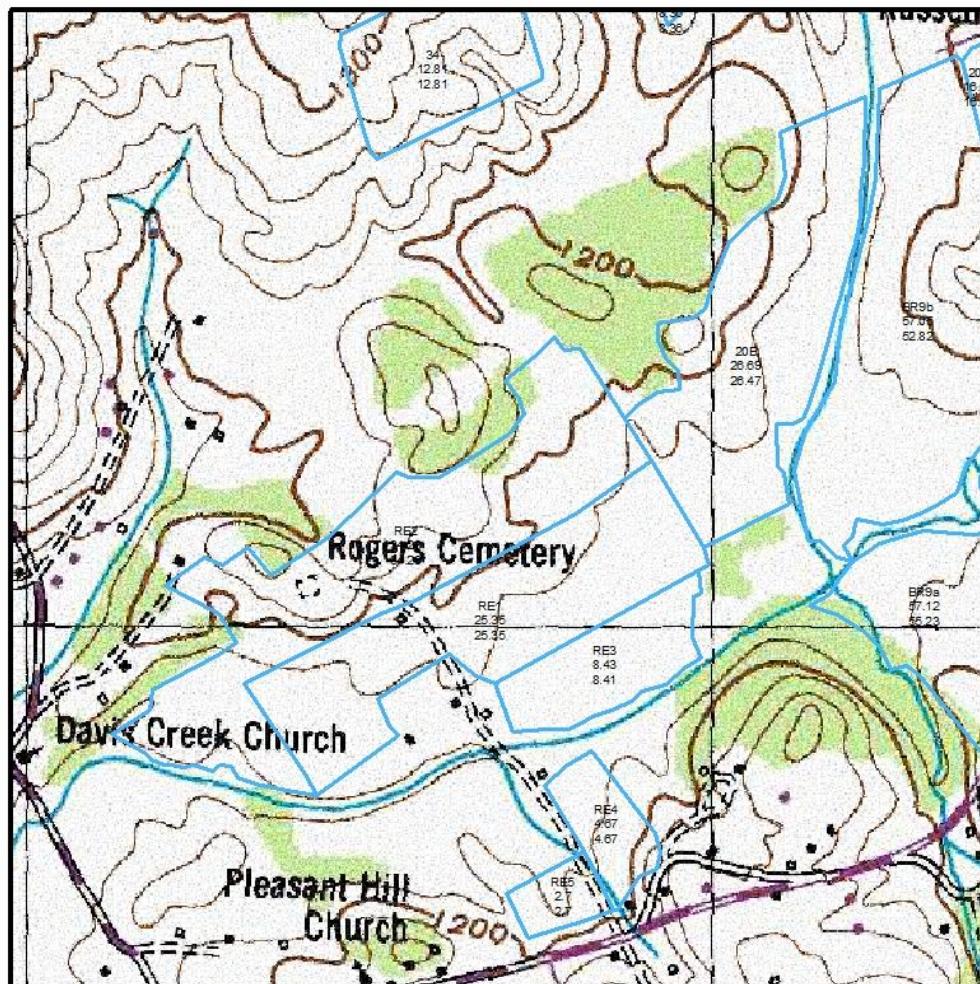
Validus Services LLC



County: Claiborne
State: Tennessee

Hickory Corner Dairy Topo 9

Date: 10/15/09

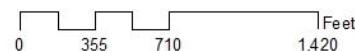


Legend

SNMP_Fields



Validus Services LLC



5.2. Manure Application Setback Distances

Setback Requirements: Class II CAFO

Feature	Setback Criteria	Setback Distance (Feet)
Streams	Applied upgradient, no permanent or insufficient vegetated setback	100
Streams	New operation, near high quality stream	60
Surface waters	Applied upgradient, no permanent or insufficient vegetated setback	100
Open tile line inlet structures	Applied upgradient, no permanent or insufficient vegetated setback	100
Sinkholes	Applied upgradient, no permanent or insufficient vegetated setback	100
Agricultural well heads	Applied upgradient, no permanent or insufficient vegetated setback	100
Other conduits to surface waters	Applied upgradient, no permanent or insufficient vegetated setback	100
Potable well, public or private	Application upgradient of feature	300
Potable well, public or private	Application down-gradient of feature	150

Source: TN DEQ Rule 1200-4-5-.14(17)(d) (<http://www.state.tn.us/sos/rules/1200/1200-04/1200-04-05.pdf>)

5.3. Soil Test Data

Field	Test Year	OM (%)	P Test Used	P	K	Mg	Ca	Units	Soil pH	Buffer pH	CEC (meq/100g)
17 (B)	2009		Mehlich-1	109	430	663	2,012	lbs/a	6.7		
17 (A)	2009		Mehlich-1	37	237	328	1,461	lbs/a	6.4		
65	2009		Mehlich-1	38	211	439	1,998	lbs/a	6.3		
25	2009		Mehlich-1	18	111	64	1,252	lbs/a	5.8	7.6	3.5
7	2009		Mehlich-1	80	190			lbs/a	6.2		
1	2009		Mehlich-1	196	363	310	2,679	lbs/a	6.8		
3	2009		Mehlich-1	240	216	553	3,586	lbs/a	6.6		
2	2009		Mehlich-1	111	339	594	2,498	lbs/a	7.1		
5	2009		Mehlich-1	86	229	284	1,564	lbs/a	6.1		
40 (c)	2009		Mehlich-1	30	139	64	1,280	lbs/a	6.7		
40 (a)	2009		Mehlich-1	30	139	64	1,280	lbs/a	6.7		
40 (b)	2009		Mehlich-1	30	139	64	1,280	lbs/a	6.7		
10 (b)	2009		Mehlich-1	72	252	572	2,599	lbs/a	6.7		
9	2009		Mehlich-1	31	204	334	1,542	lbs/a	5.6	7.3	5.5
10 (a)	2009		Mehlich-1	72	252	572	2,599	lbs/a	6.7		
AW3	2009		Mehlich-1	4	67	64	1,105	lbs/a	5.5	7.4	3.1
AW5	2009		Mehlich-1	8	79	64	1,144	lbs/a	5.5	7.5	3.2
AW7	2009		Mehlich-1	4	58	64	1,049	lbs/a	5.4	7.4	3.0
AW7 (b)	2009		Mehlich-1	4	63	64	1,035	lbs/a	5.4	7.5	2.9
AW7 (a)	2009		Mehlich-1	4	63	64	1,035	lbs/a	5.4	7.5	2.9
12	2009		Mehlich-1	114	215	607	2,179	lbs/a	6.6		
AW8	2009		Mehlich-1	4	65	64	1,051	lbs/a	5.4	7.4	3.0
28	2009		Mehlich-1	163	281	720	2,280	lbs/a	6.5		
11 (a)	2009		Mehlich-1	46	188	620		lbs/a	6.6		
11 (b)	2009		Mehlich-1	46	188	620		lbs/a	6.6		
13 (a)	2009		Mehlich-1	53	187	444		lbs/a	6.1		
13 (b)	2009		Mehlich-1	53	187	444		lbs/a	6.1		
14 (A)	2009		Mehlich-1	27	206	500	1,898	lbs/a	6.2		
14 (B)	2009		Mehlich-1	77	285	582		lbs/a	6.8		

Field	Test Year	OM (%)	P Test Used	P	K	Mg	Ca	Units	Soil pH	Buffer pH	CEC (meq/100g)
26	2009		Mehlich-1	144	287	664	2,265	lbs/a	6.4		
15Aa	2009		Mehlich-1	76	320			lbs/a	5.9	7.5	
27	2009		Mehlich-1	218	353	981	3,391	lbs/a	6.7		
15Ab	2009		Mehlich-1	76	320			lbs/a	5.9	7.5	
29 (B)	2009		Mehlich-1	195	127	1,034	3,282	lbs/a	6.7		
30	2009		Mehlich-1	95	228	677	2,144	lbs/a	5.9	7.3	8.5
31 (b)	2009		Mehlich-1	93	232	688	2,761	lbs/a	6.6		
31 (a)	2009		Mehlich-1	93	232	688	2,761	lbs/a	6.6		
29A	2009		Mehlich-1	167	271	784	2,713	lbs/a	6.6		
18a	2009		Mehlich-1	214	355	657	2,894	lbs/a	6.8		
18b	2009		Mehlich-1	214	355	657	2,894	lbs/a	6.8		
BR9a	2009		Mehlich-1	4	221	64	1,229	lbs/a	5.9	7.7	3.6
21	2009		Mehlich-1	126	253	599	2,792	lbs/a	7.0		
BR9b	2009		Mehlich-1	4	221	64	1,229	lbs/a	5.9	7.7	3.6
BR9c	2009		Mehlich-1	4	221	64	1,229	lbs/a	5.9	7.7	3.6
20A	2009		Mehlich-1	184	270	662	4,068	lbs/a	7.0		
BR4	2009		Mehlich-1	4	223	64	1,257	lbs/a	5.9	7.3	3.7
20B	2009		Mehlich-1	146	257	480	2,561	lbs/a	6.3		
BR11	2009		Mehlich-1	4	228	64	1,280	lbs/a	5.9	7.5	3.8
34	2009		Mehlich-1	48	150			lbs/a	5.4	7.5	
39	2009		Mehlich-1	37	127	583	1,949	lbs/a	6.8		
33	2009		Mehlich-1	37	237	328	1,461	lbs/a	6.4		
38	2009		Mehlich-1	85	79	468	2,028	lbs/a	6.7		
35	2009		Mehlich-1	56	190			lbs/a	5.6	7.5	
36	2009		Mehlich-1	126	103	263	1,524	lbs/a	6.3		
37	2009		Mehlich-1	70	141	432	1,668	lbs/a	6.6		
32a	2009		Mehlich-1	109	89	340	1,604	lbs/a	6.7		
32b	2009		Mehlich-1	83	169	368	1,458	lbs/a	6.3		
WB1b	2009		Mehlich-1	4	67	64	1,047	lbs/a	5.6	7.6	3.0
WB1a	2009		Mehlich-1	4	67	64	1,047	lbs/a	5.6	7.6	3.0

Field	Test Year	OM (%)	P Test Used	P	K	Mg	Ca	Units	Soil pH	Buffer pH	CEC (meq/100g)
RE2	2009		Mehlich-1	4	104	64	1,177	lbs/a	5.5	7.6	3.3
RE1	2009		Mehlich-1	112	132	275	968	lbs/a	6.3		
RE3	2009		Mehlich-1	4	104	64	1,280	lbs/a	5.7	7.6	3.6
RE4	2009		Mehlich-1	4	101	64	1,080	lbs/a	5.5	7.5	3.1
RE5	2009		Mehlich-1	235	458	168	1,180	lbs/a	5.8	7.3	4.2
BR 12	2009		Mehlich-1	15	119	326	1,490	lbs/a	6.2		
8	2009		Mehlich-1	235	458	168	1,180	lbs/a	6.4		
8a	2009		Mehlich-1	235	458	168	1,180	lbs/a	6.4		
6	2009		Mehlich-1	242	748	611	3,206	lbs/a	7.1		
4	2009		Mehlich-1	303	341	661	3,580	lbs/a	6.8		

5.4. Manure Nutrient Analysis

Manure Source	Dry Matter (%)	Total N	NH ₄ -N	Total P ₂ O ₅	Total K ₂ O	Avail. P ₂ O ₅	Avail. K ₂ O	Units	Analysis Source and Date
Holding Pond 1		11.9		1.9	7.1	1.9	7.1	Lb/1000Gal	A&L Labs
Dry Stack		8.2		6.9	1.9	6.9	1.9	Lb/Ton	A&L Labs
Calf Barn		2.8		0.3	2.1	0.3	2.1	Lb/Ton	A&L Labs
Calf Shed		2.8		0.3	2.1	0.3	2.1	Lb/Ton	A&L Labs

(1) Entered analysis may be the average of several individual analyses.

(2) Tennessee assumes that 100% of manure phosphorus and 100% of manure potassium is crop available. First-year per-acre nitrogen availability for individual manure applications is given in the Planned Nutrient Applications table. For more information about nitrogen availability in Tennessee, see "Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94 (http://wastemgmt.ag.utk.edu/ExtensionProjects/extension_publications.htm).

5.5. Planned Crops and Fertilizer Recommendations

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
17 (B)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (B)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
17 (B)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (B)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
17 (B)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (B)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
17 (A)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (A)	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
17 (A)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (A)	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	
17 (A)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
17 (A)	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
65	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
65	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
65	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
65	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
65	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
65	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
25	2010	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
25	2011	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
25	2012	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
7	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
7	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
7	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
7	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
7	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
7	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
1	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
1	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
1	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
1	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
1	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
1	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
3	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
3	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
3	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
3	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
3	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
3	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
2	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
2	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
2	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
2	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
2	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
2	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
5	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
5	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
5	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
5	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
5	2012	Sm gr/ryegrass flgrz+sp hay*	4.0 Ton	180	0	0	112	40	120	
5	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
40 (c)	2010	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (c)	2011	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (c)	2012	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (a)	2010	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (a)	2011	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (a)	2012	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (b)	2010	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (b)	2011	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
40 (b)	2012	Fescue hay maint	3.0 Ton	105	30	30	114	54	156	
10 (b)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
10 (b)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
10 (b)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
10 (b)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
10 (b)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
10 (b)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
9	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
9	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
9	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
9	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	
9	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
9	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
10 (a)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
10 (a)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
10 (a)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
10 (a)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
10 (a)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
10 (a)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
AW3	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW3	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW3	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW5	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW5	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW5	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (b)	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (b)	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (b)	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (a)	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (a)	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW7 (a)	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
12	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
12	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
12	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
12	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
12	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
12	2012	Corn grain	20.0 Bu	120	0	0	15	9	6	
AW8	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW8	2011	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
AW8	2012	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
28	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
28	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
28	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
28	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
28	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
28	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (a)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (a)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (a)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (a)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (a)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (a)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (b)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (b)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (b)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (b)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
11 (b)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
11 (b)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
13 (a)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (a)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
13 (a)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (a)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
13 (a)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (a)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
13 (b)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (b)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
13 (b)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (b)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
13 (b)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
13 (b)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
14 (A)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	40	0	112	40	120	
14 (A)	2010	Tobacco	22.0 CWT	175	90	90	95	9	103	
14 (A)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	40	0	112	40	120	
14 (A)	2011	Tobacco	22.0 CWT	175	90	90	95	9	103	
14 (A)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	40	0	112	40	120	
14 (A)	2012	Tobacco	22.0 CWT	175	90	90	95	9	103	
14 (B)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
14 (B)	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
14 (B)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
14 (B)	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
14 (B)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
14 (B)	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
26	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
26	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
26	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
26	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
26	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
26	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Aa	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
15Aa	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Aa	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
15Aa	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Aa	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
15Aa	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
27	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
27	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
27	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
27	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
27	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
27	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Ab	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
15Ab	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Ab	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
15Ab	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
15Ab	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
15Ab	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
29 (B)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
29 (B)	2010	Corn grain	125.0 Bu	120	0	50	94	55	36	
29 (B)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
29 (B)	2011	Corn grain	125.0 Bu	120	0	50	94	55	36	
29 (B)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
29 (B)	2012	Corn grain	125.0 Bu	120	0	50	94	55	36	
30	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
30	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
30	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
30	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
30	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
30	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (b)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (b)	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (b)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (b)	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (b)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (b)	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (a)	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (a)	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (a)	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (a)	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
31 (a)	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
31 (a)	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
29A	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
29A	2010	Corn grain	125.0 Bu	120	0	0	94	55	36	
29A	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
29A	2011	Corn grain	125.0 Bu	120	0	0	94	55	36	
29A	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
29A	2012	Corn grain	125.0 Bu	120	0	0	94	55	36	
18a	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
18a	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
18a	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
18a	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
18a	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
18a	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
18b	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
18b	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
18b	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
18b	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
18b	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
18b	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
BR9a	2010	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9a	2011	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9a	2012	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
21	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
21	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
21	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
21	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
21	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
21	2012	Corn grain	20.0 Bu	120	0	0	15	9	6	
BR9b	2010	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9b	2011	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9b	2012	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9c	2010	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9c	2011	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR9c	2012	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
20A	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20A	2010	Tobacco	22.0 CWT	175	0	90	95	9	103	
20A	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20A	2011	Tobacco	22.0 CWT	175	0	90	95	9	103	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
20A	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20A	2012	Tobacco	22.0 CWT	175	0	90	95	9	103	
BR4	2010	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR4	2011	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR4	2012	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
20B	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20B	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
20B	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20B	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
20B	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
20B	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
BR11	2010	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR11	2011	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
BR11	2012	Fescue hay maint	3.0 Ton	105	60	0	114	54	156	
34	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
34	2010	Tobacco	22.0 CWT	175	30	180	95	9	103	
34	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
34	2011	Tobacco	22.0 CWT	175	30	180	95	9	103	
34	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
34	2012	Tobacco	22.0 CWT	175	30	180	95	9	103	
39	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
39	2010	Tobacco	22.0 CWT	175	30	180	95	9	103	
39	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
39	2011	Tobacco	22.0 CWT	175	30	180	95	9	103	
39	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
39	2012	Tobacco	22.0 CWT	175	30	180	95	9	103	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
33	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
33	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
33	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
33	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	
33	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
33	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
38	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
38	2010	Corn silage	20.0 Ton	150	0	240	166	72	166	
38	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
38	2011	Corn silage	20.0 Ton	150	0	240	166	72	166	
38	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
38	2012	Corn silage	20.0 Ton	150	0	240	166	72	166	
35	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
35	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
35	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
35	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	
35	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
35	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
36	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
36	2010	Tobacco	22.0 CWT	175	0	180	95	9	103	
36	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
36	2011	Tobacco	22.0 CWT	175	0	180	95	9	103	
36	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
36	2012	Tobacco	22.0 CWT	175	0	180	95	9	103	
37	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
37	2010	Corn silage	20.0 Ton	150	0	160	166	72	166	
37	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
37	2011	Corn silage	20.0 Ton	150	0	160	166	72	166	
37	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	40	112	40	120	
37	2012	Corn silage	20.0 Ton	150	0	160	166	72	166	
32a	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
32a	2010	Tobacco	22.0 CWT	175	30	300	95	9	103	
32a	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
32a	2011	Tobacco	22.0 CWT	175	30	300	95	9	103	
32a	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	80	112	40	120	
32a	2012	Tobacco	22.0 CWT	175	30	300	95	9	103	
32b	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
32b	2010	Tobacco	22.0 CWT	175	30	90	95	9	103	
32b	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
32b	2011	Tobacco	22.0 CWT	175	30	90	95	9	103	
32b	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
32b	2012	Tobacco	22.0 CWT	175	30	90	95	9	103	
WB1b	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
WB1b	2011	Fescue hay maint	Ton	60	60	60				
WB1b	2012	Fescue hay maint	Ton	60	60	60				
WB1a	2010	Fescue hay maint	3.0 Ton	105	60	60	114	54	156	
WB1a	2011	Fescue hay maint	Ton	60	60	60				
WB1a	2012	Fescue hay maint	Ton	60	60	60				
RE2	2010	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE2	2011	Fescue hay maint	Ton	60	60	30				
RE2	2012	Fescue hay maint	Ton	60	60	30				
RE1	2010	Fescue hay maint	3.0 Ton	105	0	30	114	54	156	

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RE1	2011	Fescue hay maint	Ton	60	0	30				
RE1	2012	Fescue hay maint	Ton	60	0	30				
RE3	2010	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE3	2011	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE3	2012	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE4	2010	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE4	2011	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE4	2012	Fescue hay maint	3.0 Ton	105	60	30	114	54	156	
RE5	2010	Fescue hay maint	3.0 Ton	105	0	0	114	54	156	
RE5	2011	Fescue hay maint	3.0 Ton	105	0	0	114	54	156	
RE5	2012	Fescue hay maint	3.0 Ton	105	0	0	114	54	156	
BR 12	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	80	40	112	40	120	
BR 12	2010	Tobacco	22.0 CWT	175	150	180	95	9	103	
BR 12	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	80	40	112	40	120	
BR 12	2011	Tobacco	22.0 CWT	175	150	180	95	9	103	
BR 12	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	80	40	112	40	120	
BR 12	2012	Tobacco	22.0 CWT	175	150	180	95	9	103	
8	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8	2010	Tobacco	22.0 CWT	175	0	0	95	9	103	
8	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8	2011	Tobacco	22.0 CWT	175	0	0	95	9	103	
8	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8	2012	Tobacco	22.0 CWT	175	0	0	95	9	103	
8a	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8a	2010	Tobacco	22.0 CWT	175	0	0	95	9	103	
8a	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8a	2011	Tobacco	22.0 CWT	175	0	0	95	9	103	

Field	Crop Year	Planned Crop	Yield Goal (per Acre)	N Rec (Lbs/A)	P ₂ O ₅ Rec (Lbs/A)	K ₂ O Rec (Lbs/A)	N Removed (Lbs/A)	P ₂ O ₅ Removed (Lbs/A)	K ₂ O Removed (Lbs/A)	Custom Fert. Rec. Source
8a	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
8a	2012	Tobacco	22.0 CWT	175	0	0	95	9	103	
6	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
6	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
6	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
6	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
6	2012	Sm gr/ryegrss flgrz+sp hay*	4.0 Ton	180	0	0	112	40	120	
6	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	
4	2010	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
4	2010	Corn silage	20.0 Ton	150	0	0	166	72	166	
4	2011	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
4	2011	Corn silage	20.0 Ton	150	0	0	166	72	166	
4	2012	Sm gr/ryegrass spring hay*	4.0 Ton	165	0	0	112	40	120	
4	2012	Corn silage	20.0 Ton	150	0	0	166	72	166	

* Unharvested cover crop or first crop in double-crop system.

^a Custom fertilizer recommendation.

All crop removal and fertilizer recommendations data based UT PSS 185

5.6. Manure Application Planning Calendar – November 2009 through October 2010

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2010 Crop (Prev. Primary Crop)	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10
17 (B)	23.5	23.5	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)												
17 (A)	5.0	5.0	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
65	67.1	67.1	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)							514.0					
25	24.5	24.4	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)												
7	8.8	8.8	Sequoia SICL (Ssr 8-15%)	Corn silage (Corn silage)												
1	6.9	6.3	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
3	7.6	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
2	8.9	8.9	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)												
5	12.1	12.1	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
40 (c)	15.5	15.5	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (a)	44.6	44.6	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (b)	17.9	17.9	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)												
10 (b)	6.4	6.4	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)												
9	6.9	6.9	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)											5.8	
10 (a)	22.0	22.0	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)												
AW3	5.8	4.6	Clarksville CR-SIL (Ccz 25-50%)	Fescue hay maint (Fescue hay maint)												
AW5	26.9	26.5	Dewey SICL (Dwt 15-30%)	Fescue hay maint (Fescue hay maint)												
AW7	3.0	2.7	Etowah SICL (Ecr 2-12%)	Fescue hay maint (Fescue hay maint)												
AW7 (b)	2.7	2.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
AW7 (a)	1.9	1.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2010 Crop (Prev. Primary Crop)	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10
12	15.8	15.7	Etowah SICL (Ecr 2-12%)	Corn silage (Corn grain)												
AW8	16.5	16.5	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
28	10.7	10.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
11 (a)	26.5	26.5	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
11 (b)	1.4	1.4	Holston FSL (Stx 7-20%)	Corn silage (Corn silage)												
13 (a)	18.5	18.0	Philo SL (Pf 0-3%)	Corn silage (Corn silage)											143. 1	
13 (b)	5.8	5.8	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)						7.8						
14 (A)	10.9	10.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)											20.9	
14 (B)	14.7	14.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)							38.1					
26	6.7	6.7	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)												
15Aa	6.2	5.1	Philo SL (Pf 0-3%)	Corn grain (Corn grain)											9.1	
27	5.8	5.8	Etowah SIL (Crg 2-7%)	Corn grain (Corn grain)												
15Ab	4.8	4.3	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
29 (B)	6.9	5.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
30	9.0	9.0	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)												
31 (b)	3.9	3.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
31 (a)	6.7	6.0	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
29A	14.6	14.6	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
18a	8.2	7.8	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
18b	4.6	4.3	Melvin SIL (MI 0-2%)	Corn silage (Corn silage)												
BR9a	57.1	55.2	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2010 Crop (Prev. Primary Crop)	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10
21	3.3	3.3	Melvin SIL (MI 0-2%)	Corn silage (Corn grain)												
BR9b	57.1	52.8	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
BR9c	31.7	30.8	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
20A	16.0	16.0	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
BR4	6.1	6.1	Fullerton CR-SIL (Fs 5-12%)	Fescue hay maint (Fescue hay maint)												
20B	26.7	26.5	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)												
BR11	5.2	5.2	Fullerton CR-SIL (Fc 5-12%)	Fescue hay maint (Fescue hay maint)												
34	12.8	12.8	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
39	10.8	10.8	Dewey SICL (Dwt 15-30%)	Tobacco (Tobacco)												
33	8.4	8.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
38	35.8	35.8	Dewey SIL (Ds 3-8%)	Corn silage (Corn silage)												
35	5.4	5.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
36	9.9	9.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)												
37	11.5	11.5	Etowah SIL (Es 2-10%)	Corn silage (Corn silage)												
32a	9.5	9.0	Holston FSL (Ho 0-15%)	Tobacco (Tobacco)												
32b	22.3	20.5	Talbott SIL (Ts 0-7%)	Tobacco (Tobacco)												
WB1b	30.0	30.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
WB1a	48.0	48.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
RE2	34.3	34.3	Dewey SICL (Dwr 8-15%)	Fescue hay maint (Fescue hay maint)												
RE1	25.4	25.4	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE3	8.4	8.4	Lindside SIL (LI 0-3%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2010 Crop (Prev. Primary Crop)	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10
RE4	4.7	4.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE5	2.7	2.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
BR 12	4.0	3.9	Fullerton CR-SIL (Fs 5-12%)	Tobacco (Tobacco)												
8	8.8	8.3	Etowah SIL (Cr 8-15%)	Tobacco (Tobacco)												
8a	1.2	1.2	Rock outcrop UWB (SsT 0-7%)	Tobacco (Tobacco)												
6	11.3	11.3	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
4	7.8	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
<i>Total</i>	<i>1,032.4</i>	<i>1,013.8</i>									<i>521.8</i>	<i>38.1</i>			<i>178.9</i>	

Crop in field	No. indicates total loads "X" indicates other manure apps
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Manure Application Planning Calendar – November 2010 through October 2011

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2011 Crop (Prev. Primary Crop)	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11
17 (B)	23.5	23.5	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)						43.8					94.5	
17 (A)	5.0	5.0	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
65	67.1	67.1	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
25	24.5	24.4	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)						11.8						
7	8.8	8.8	Sequoia SICL (Ssr 8-15%)	Corn silage (Corn silage)												
1	6.9	6.3	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
3	7.6	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
2	8.9	8.9	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)												
5	12.1	12.1	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
40 (c)	15.5	15.5	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (a)	44.6	44.6	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (b)	17.9	17.9	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)												
10 (b)	6.4	6.4	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)												
9	6.9	6.9	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
10 (a)	22.0	22.0	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)												
AW3	5.8	4.6	Clarksville CR-SIL (Ccz 25-50%)	Fescue hay maint (Fescue hay maint)												
AW5	26.9	26.5	Dewey SICL (Dwt 15-30%)	Fescue hay maint (Fescue hay maint)												
AW7	3.0	2.7	Etowah SICL (Ecr 2-12%)	Fescue hay maint (Fescue hay maint)												
AW7 (b)	2.7	2.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
AW7 (a)	1.9	1.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2011 Crop (Prev. Primary Crop)	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11
12	15.8	15.7	Etowah SICL (Ecr 2-12%)	Corn silage (Corn silage)												
AW8	16.5	16.5	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
28	10.7	10.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
11 (a)	26.5	26.5	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
11 (b)	1.4	1.4	Holston FSL (Stx 7-20%)	Corn silage (Corn silage)												
13 (a)	18.5	18.0	Philo SL (Pf 0-3%)	Corn silage (Corn silage)												
13 (b)	5.8	5.8	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)												
14 (A)	10.9	10.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)						2.5						
14 (B)	14.7	14.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)						122.6						
26	6.7	6.7	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)						7.6						
15Aa	6.2	5.1	Philo SL (Pf 0-3%)	Corn grain (Corn grain)						4.3						
27	5.8	5.8	Etowah SIL (Crg 2-7%)	Corn grain (Corn grain)												
15Ab	4.8	4.3	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)						33.9						
29 (B)	6.9	5.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
30	9.0	9.0	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)												
31 (b)	3.9	3.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
31 (a)	6.7	6.0	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
29A	14.6	14.6	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
18a	8.2	7.8	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
18b	4.6	4.3	Melvin SIL (MI 0-2%)	Corn silage (Corn silage)						38.6						
BR9a	57.1	55.2	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2011 Crop (Prev. Primary Crop)	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11
21	3.3	3.3	Melvin SIL (MI 0-2%)	Corn silage (Corn silage)						27.5						
BR9b	57.1	52.8	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
BR9c	31.7	30.8	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
20A	16.0	16.0	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
BR4	6.1	6.1	Fullerton CR-SIL (Fs 5-12%)	Fescue hay maint (Fescue hay maint)												
20B	26.7	26.5	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)												
BR11	5.2	5.2	Fullerton CR-SIL (Fc 5-12%)	Fescue hay maint (Fescue hay maint)												
34	12.8	12.8	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
39	10.8	10.8	Dewey SICL (Dwt 15-30%)	Tobacco (Tobacco)												
33	8.4	8.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
38	35.8	35.8	Dewey SIL (Ds 3-8%)	Corn silage (Corn silage)											16.7	
35	5.4	5.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
36	9.9	9.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)												
37	11.5	11.5	Etowah SIL (Es 2-10%)	Corn silage (Corn silage)												95.8
32a	9.5	9.0	Holston FSL (Ho 0-15%)	Tobacco (Tobacco)												
32b	22.3	20.5	Talbott SIL (Ts 0-7%)	Tobacco (Tobacco)												
WB1b	30.0	30.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
WB1a	48.0	48.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
RE2	34.3	34.3	Dewey SICL (Dwr 8-15%)	Fescue hay maint (Fescue hay maint)												
RE1	25.4	25.4	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE3	8.4	8.4	Lindside SIL (LI 0-3%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2011 Crop (Prev. Primary Crop)	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11
RE4	4.7	4.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE5	2.7	2.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
BR 12	4.0	3.9	Fullerton CR-SIL (Fs 5-12%)	Tobacco (Tobacco)												
8	8.8	8.3	Etowah SIL (Cr 8-15%)	Tobacco (Tobacco)												
8a	1.2	1.2	Rock outcrop UWB (SsT 0-7%)	Tobacco (Tobacco)												
6	11.3	11.3	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
4	7.8	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
<i>Total</i>	<i>1,032.4</i>	<i>1,013.8</i>									292.6					<i>207.0</i>

Crop in field	No. indicates total loads "X" indicates other manure apps
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Manure Application Planning Calendar – November 2011 through October 2012

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2012 Crop (Prev. Primary Crop)	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Jul '12	Aug '12	Sep '12	Oct '12
17 (B)	23.5	23.5	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)												
17 (A)	5.0	5.0	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
65	67.1	67.1	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
25	24.5	24.4	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)												
7	8.8	8.8	Sequoia SICL (Ssr 8-15%)	Corn silage (Corn silage)												
1	6.9	6.3	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
3	7.6	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
2	8.9	8.9	Etowah SIL (Crg 2-7%)	Corn silage (Corn silage)												
5	12.1	12.1	Etowah SIL (Crg 2-7%)	Tobacco (Tobacco)												
40 (c)	15.5	15.5	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (a)	44.6	44.6	Etowah SIL (Cr 8-15%)	Fescue hay maint (Fescue hay maint)												
40 (b)	17.9	17.9	Etowah SIL (Crg 2-7%)	Fescue hay maint (Fescue hay maint)												
10 (b)	6.4	6.4	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)							53.4					
9	6.9	6.9	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
10 (a)	22.0	22.0	Dewey SICL (Dwr 8-15%)	Corn silage (Corn silage)							183.3					
AW3	5.8	4.6	Clarksville CR-SIL (Ccz 25-50%)	Fescue hay maint (Fescue hay maint)												
AW5	26.9	26.5	Dewey SICL (Dwt 15-30%)	Fescue hay maint (Fescue hay maint)												
AW7	3.0	2.7	Etowah SICL (Ecr 2-12%)	Fescue hay maint (Fescue hay maint)												
AW7 (b)	2.7	2.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
AW7 (a)	1.9	1.6	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2012 Crop (Prev. Primary Crop)	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Jul '12	Aug '12	Sep '12	Oct '12
12	15.8	15.7	Etowah SICL (Ecr 2-12%)	Corn grain (Corn silage)												
AW8	16.5	16.5	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
28	10.7	10.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
11 (a)	26.5	26.5	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)							48.8					
11 (b)	1.4	1.4	Holston FSL (Stx 7-20%)	Corn silage (Corn silage)												
13 (a)	18.5	18.0	Philo SL (Pf 0-3%)	Corn silage (Corn silage)												
13 (b)	5.8	5.8	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)						4.7						
14 (A)	10.9	10.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)												
14 (B)	14.7	14.7	Talbott SIL (Ts 0-7%)	Corn silage (Corn silage)												
26	6.7	6.7	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)												
15Aa	6.2	5.1	Philo SL (Pf 0-3%)	Corn grain (Corn grain)												
27	5.8	5.8	Etowah SIL (Crg 2-7%)	Corn grain (Corn grain)												
15Ab	4.8	4.3	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
29 (B)	6.9	5.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
30	9.0	9.0	Etowah SIL (Cr 8-15%)	Corn grain (Corn grain)												
31 (b)	3.9	3.7	Sequatchie FSL (St 1-7%)	Corn grain (Corn grain)												
31 (a)	6.7	6.0	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
29A	14.6	14.6	Roane CR-SIL (TI 0-7%)	Corn grain (Corn grain)												
18a	8.2	7.8	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
18b	4.6	4.3	Melvin SIL (MI 0-2%)	Corn silage (Corn silage)												
BR9a	57.1	55.2	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2012 Crop (Prev. Primary Crop)	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Jul '12	Aug '12	Sep '12	Oct '12
21	3.3	3.3	Melvin SIL (MI 0-2%)	Corn grain (Corn silage)												
BR9b	57.1	52.8	Melvin SIL (MI 0-2%)	Fescue hay maint (Fescue hay maint)												
BR9c	31.7	30.8	Rock outcrop UWB (RIT 7-30%)	Fescue hay maint (Fescue hay maint)												
20A	16.0	16.0	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
BR4	6.1	6.1	Fullerton CR-SIL (Fs 5-12%)	Fescue hay maint (Fescue hay maint)												
20B	26.7	26.5	Talbott SICL (Tcr 7-15%)	Corn silage (Corn silage)												
BR11	5.2	5.2	Fullerton CR-SIL (Fc 5-12%)	Fescue hay maint (Fescue hay maint)												
34	12.8	12.8	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
39	10.8	10.8	Dewey SICL (Dwt 15-30%)	Tobacco (Tobacco)												
33	8.4	8.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
38	35.8	35.8	Dewey SIL (Ds 3-8%)	Corn silage (Corn silage)												
35	5.4	5.4	Dewey SICL (Dwr 8-15%)	Tobacco (Tobacco)												
36	9.9	9.9	Talbott SICL (Tcr 7-15%)	Tobacco (Tobacco)												
37	11.5	11.5	Etowah SIL (Es 2-10%)	Corn silage (Corn silage)												
32a	9.5	9.0	Holston FSL (Ho 0-15%)	Tobacco (Tobacco)												
32b	22.3	20.5	Talbott SIL (Ts 0-7%)	Tobacco (Tobacco)												
WB1b	30.0	30.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
WB1a	48.0	48.0	Talbott SICL (Tcr 7-15%)	Fescue hay maint (Fescue hay maint)												
RE2	34.3	34.3	Dewey SICL (Dwr 8-15%)	Fescue hay maint (Fescue hay maint)												
RE1	25.4	25.4	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE3	8.4	8.4	Lindside SIL (LI 0-3%)	Fescue hay maint (Fescue hay maint)												

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2012 Crop (Prev. Primary Crop)	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Jul '12	Aug '12	Sep '12	Oct '12
RE4	4.7	4.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
RE5	2.7	2.7	Roane CR-SIL (TI 0-7%)	Fescue hay maint (Fescue hay maint)												
BR 12	4.0	3.9	Fullerton CR-SIL (Fs 5-12%)	Tobacco (Tobacco)												
8	8.8	8.3	Etowah SIL (Cr 8-15%)	Tobacco (Tobacco)												
8a	1.2	1.2	Rock outcrop UWB (SsT 0-7%)	Tobacco (Tobacco)												
6	11.3	11.3	Etowah SIL (Cr 8-15%)	Corn silage (Corn silage)												
4	7.8	7.5	Sequatchie FSL (St 1-7%)	Corn silage (Corn silage)												
<i>Total</i>	<i>1,032.4</i>	<i>1,013.8</i>										<i>290.2</i>				

Crop in field	No. indicates total loads "X" indicates other manure apps
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5.7. Planned Nutrient Applications (Manure-spreadable Area)

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
17 (B)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		10,575 Lbs	23.5	207	0	0
17 (B)	Apr 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	43.8 Lds	306,600 Gal	5.3	315	111	414
17 (B)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		10,575 Lbs	23.5	207	0	0
17 (B)	Sep 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	55,300 Gal	94.5 Lds	661,500 Gal	12.0	299	105	393
17 (B)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		10,575 Lbs	23.5	207	0	0
17 (A)	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		750 Lbs	5.0	0	0	90
17 (A)	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,900 Lbs	5.0	197	0	0
17 (A)	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		325 Lbs	5.0	12	30	0
17 (A)	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,900 Lbs	5.0	197	0	0
17 (A)	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		325 Lbs	5.0	12	30	0
17 (A)	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		750 Lbs	5.0	0	0	90
17 (A)	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,900 Lbs	5.0	197	0	0
17 (A)	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		750 Lbs	5.0	0	0	90
17 (A)	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		325 Lbs	5.0	12	30	0
65	Apr 2010	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	514 Lds	3,598,000 Gal	61.7	315	111	414
65	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		30,195 Lbs	67.1	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
65	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		30,195 Lbs	67.1	207	0	0
65	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		30,195 Lbs	67.1	207	0	0
25	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,172 Lbs	24.4	23	60	0
25	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,220 Lbs	24.4	0	0	30
25	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		4,343 Lbs	24.4	82	0	0
25	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	165 Lbs		4,026 Lbs	24.4	76	0	0
25	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	126 Lbs		3,074 Lbs	24.4	23	58	0
25	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	30 Lbs		732 Lbs	24.4	0	0	18
25	Apr 2011	Fescue hay maint	Calf Barn	truck solid, Not incorporated	Custom	10 Ton	5.9 Lds	70.8 Ton	7.1	11	3	21
25	Apr 2011	Fescue hay maint	Calf Shed	truck solid, Not incorporated	Custom	10 Ton	5.9 Lds	70.8 Ton	7.1	11	3	21
25	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,220 Lbs	24.4	0	0	30
25	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	176 Lbs		4,294 Lbs	24.4	81	0	0
25	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,172 Lbs	24.4	23	60	0
7	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,960 Lbs	8.8	207	0	0
7	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,960 Lbs	8.8	207	0	0
7	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,960 Lbs	8.8	207	0	0
1	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,835 Lbs	6.3	207	0	0
1	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,835 Lbs	6.3	207	0	0
1	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,835 Lbs	6.3	207	0	0
3	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0
3	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0
3	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0
2	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,005 Lbs	8.9	207	0	0
2	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,005 Lbs	8.9	207	0	0
2	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,005 Lbs	8.9	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
5	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		787 Lbs	12.1	12	30	0
5	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,815 Lbs	12.1	0	0	90
5	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,018 Lbs	12.1	197	0	0
5	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,815 Lbs	12.1	0	0	90
5	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		787 Lbs	12.1	12	30	0
5	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,018 Lbs	12.1	197	0	0
5	May 2012	Sm gr/ryegrss flgrz+sp hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,018 Lbs	12.1	197	0	0
5	May 2012	Sm gr/ryegrss flgrz+sp hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,815 Lbs	12.1	0	0	90
5	May 2012	Sm gr/ryegrss flgrz+sp hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		787 Lbs	12.1	12	30	0
40 (c)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		775 Lbs	15.5	0	0	30
40 (c)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		3,131 Lbs	15.5	93	0	0
40 (c)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,008 Lbs	15.5	12	30	0
40 (c)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		3,131 Lbs	15.5	93	0	0
40 (c)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,008 Lbs	15.5	12	30	0
40 (c)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		775 Lbs	15.5	0	0	30
40 (c)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		775 Lbs	15.5	0	0	30
40 (c)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,008 Lbs	15.5	12	30	0
40 (c)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	202 Lbs		3,131 Lbs	15.5	93	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
40 (a)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		2,899 Lbs	44.6	12	30	0
40 (a)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	202 Lbs		9,009 Lbs	44.6	93	0	0
40 (a)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		2,230 Lbs	44.6	0	0	30
40 (a)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		9,009 Lbs	44.6	93	0	0
40 (a)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		2,899 Lbs	44.6	12	30	0
40 (a)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		2,230 Lbs	44.6	0	0	30
40 (a)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		2,230 Lbs	44.6	0	0	30
40 (a)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		9,009 Lbs	44.6	93	0	0
40 (a)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		2,899 Lbs	44.6	12	30	0
40 (b)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		3,616 Lbs	17.9	93	0	0
40 (b)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,163 Lbs	17.9	12	30	0
40 (b)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		895 Lbs	17.9	0	0	30
40 (b)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		895 Lbs	17.9	0	0	30
40 (b)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,163 Lbs	17.9	12	30	0
40 (b)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	202 Lbs		3,616 Lbs	17.9	93	0	0
40 (b)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	202 Lbs		3,616 Lbs	17.9	93	0	0
40 (b)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		895 Lbs	17.9	0	0	30
40 (b)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	65 Lbs		1,163 Lbs	17.9	12	30	0
10 (b)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,880 Lbs	6.4	207	0	0
10 (b)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,880 Lbs	6.4	207	0	0
10 (b)	Apr 2012	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	53.4 Lds	373,800 Gal	6.4	315	111	414
10 (b)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,880 Lbs	6.4	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
9	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,002 Lbs	6.9	197	0	0
9	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		449 Lbs	6.9	12	30	0
9	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,035 Lbs	6.9	0	0	90
9	Sep 2010	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	10 Ton	5.8 Lds	69.6 Ton	7.0	33	69	19
9	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,002 Lbs	6.9	197	0	0
9	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	Supp. K	118 Lbs		814 Lbs	6.9	0	0	71
9	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,035 Lbs	6.9	0	0	90
9	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,002 Lbs	6.9	197	0	0
10 (a)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		9,900 Lbs	22.0	207	0	0
10 (a)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		9,900 Lbs	22.0	207	0	0
10 (a)	Apr 2012	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	183.3 Lds	1,283,100 Gal	22.0	315	111	414
10 (a)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		9,900 Lbs	22.0	207	0	0
AW3	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		598 Lbs	4.6	23	60	0
AW3	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		460 Lbs	4.6	0	0	60
AW3	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		819 Lbs	4.6	82	0	0
AW3	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		819 Lbs	4.6	82	0	0
AW3	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		460 Lbs	4.6	0	0	60
AW3	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		598 Lbs	4.6	23	60	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
AW3	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		598 Lbs	4.6	23	60	0
AW3	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		460 Lbs	4.6	0	0	60
AW3	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		819 Lbs	4.6	82	0	0
AW5	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,445 Lbs	26.5	23	60	0
AW5	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		2,650 Lbs	26.5	0	0	60
AW5	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		4,717 Lbs	26.5	82	0	0
AW5	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,445 Lbs	26.5	23	60	0
AW5	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		2,650 Lbs	26.5	0	0	60
AW5	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		4,717 Lbs	26.5	82	0	0
AW5	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		4,717 Lbs	26.5	82	0	0
AW5	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,445 Lbs	26.5	23	60	0
AW5	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		2,650 Lbs	26.5	0	0	60
AW7	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		270 Lbs	2.7	0	0	60
AW7	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		481 Lbs	2.7	82	0	0
AW7	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		351 Lbs	2.7	23	60	0
AW7	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		270 Lbs	2.7	0	0	60
AW7	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		481 Lbs	2.7	82	0	0
AW7	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		351 Lbs	2.7	23	60	0
AW7	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		270 Lbs	2.7	0	0	60
AW7	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		481 Lbs	2.7	82	0	0
AW7	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		351 Lbs	2.7	23	60	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
AW7 (b)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		260 Lbs	2.6	0	0	60
AW7 (b)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		463 Lbs	2.6	82	0	0
AW7 (b)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		338 Lbs	2.6	23	60	0
AW7 (b)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		463 Lbs	2.6	82	0	0
AW7 (b)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		260 Lbs	2.6	0	0	60
AW7 (b)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		338 Lbs	2.6	23	60	0
AW7 (b)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		260 Lbs	2.6	0	0	60
AW7 (b)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		338 Lbs	2.6	23	60	0
AW7 (b)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		463 Lbs	2.6	82	0	0
AW7 (a)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		208 Lbs	1.6	23	60	0
AW7 (a)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		160 Lbs	1.6	0	0	60
AW7 (a)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		285 Lbs	1.6	82	0	0
AW7 (a)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		160 Lbs	1.6	0	0	60
AW7 (a)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		208 Lbs	1.6	23	60	0
AW7 (a)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		285 Lbs	1.6	82	0	0
AW7 (a)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		285 Lbs	1.6	82	0	0
AW7 (a)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		208 Lbs	1.6	23	60	0
AW7 (a)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		160 Lbs	1.6	0	0	60
12	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		7,065 Lbs	15.7	207	0	0
12	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		7,065 Lbs	15.7	207	0	0
AW8	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		1,650 Lbs	16.5	0	0	60
AW8	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		2,145 Lbs	16.5	23	60	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
AW8	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		2,937 Lbs	16.5	82	0	0
AW8	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		2,937 Lbs	16.5	82	0	0
AW8	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		1,650 Lbs	16.5	0	0	60
AW8	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		2,145 Lbs	16.5	23	60	0
AW8	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		2,145 Lbs	16.5	23	60	0
AW8	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		2,937 Lbs	16.5	82	0	0
AW8	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		1,650 Lbs	16.5	0	0	60
28	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,815 Lbs	10.7	207	0	0
28	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,815 Lbs	10.7	207	0	0
28	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		4,815 Lbs	10.7	207	0	0
11 (a)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
11 (a)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
11 (a)	Apr 2012	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	Custom	10 Ton	12 Lds	144 Ton	14.4	33	69	19
11 (a)	Apr 2012	Sm gr/ryegrass spring hay	Calf Barn	truck solid, Not incorporated	Custom	10 Ton	5.9 Lds	70.8 Ton	7.1	11	3	21
11 (a)	Apr 2012	Sm gr/ryegrass spring hay	Calf Shed	truck solid, Not incorporated	Custom	10 Ton	1.2 Lds	14.4 Ton	1.4	11	3	21
11 (a)	Apr 2012	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	29.7 Lds	207,900 Gal	3.6	315	111	414
11 (a)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
11 (b)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		630 Lbs	1.4	207	0	0
11 (b)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		630 Lbs	1.4	207	0	0
11 (b)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		630 Lbs	1.4	207	0	0
13 (a)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		8,100 Lbs	18.0	207	0	0
13 (a)	Sep 2010	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	54,000 Gal	143.1 Lds	1,001,700 Gal	18.6	292	103	383

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
13 (a)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		8,100 Lbs	18.0	207	0	0
13 (a)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		8,100 Lbs	18.0	207	0	0
13 (b)	Apr 2010	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	16 Ton	7.8 Lds	93.6 Ton	5.8	53	110	30
13 (b)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,610 Lbs	5.8	207	0	0
13 (b)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,610 Lbs	5.8	207	0	0
13 (b)	Apr 2012	Sm gr/ryegrass spring hay	Calf Shed	truck solid, Not incorporated	Custom	10 Ton	4.7 Lds	56.4 Ton	5.6	11	3	21
13 (b)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		2,610 Lbs	5.8	207	0	0
14 (A)	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,322 Lbs	10.9	197	0	0
14 (A)	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	282 Lbs		3,074 Lbs	10.9	51	130	0
14 (A)	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,635 Lbs	10.9	0	0	90
14 (A)	Sep 2010	Sm gr/ryegrass spring hay	Calf Shed	truck solid, Not incorporated	1-yr P	309 Ton	9.1 Lds	109.2 Ton	0.4	340	93	649
14 (A)	Sep 2010	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	18.5 Ton	2.7 Lds	32.4 Ton	1.8	61	128	35
14 (A)	Sep 2010	Sm gr/ryegrass spring hay	Calf Barn	truck solid, Not incorporated	1-yr P	309 Ton	9.1 Lds	109.2 Ton	0.4	340	93	649
14 (A)	Apr 2011	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	19 Ton	2.5 Lds	30 Ton	1.6	63	131	36
14 (A)	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	Supp. K	51 Lbs		556 Lbs	10.9	0	0	31
14 (A)	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,322 Lbs	10.9	197	0	0
14 (A)	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	Supp. P	180 Lbs		1,962 Lbs	10.9	32	83	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
14 (A)	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,635 Lbs	10.9	0	0	90
14 (A)	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,322 Lbs	10.9	197	0	0
14 (A)	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	282 Lbs		3,074 Lbs	10.9	51	130	0
14 (B)	May 2010	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	38.1 Lds	266,700 Gal	4.6	315	111	414
14 (B)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		6,615 Lbs	14.7	207	0	0
14 (B)	Apr 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	122.6 Lds	858,200 Gal	14.7	315	111	414
14 (B)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		6,615 Lbs	14.7	207	0	0
14 (B)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		6,615 Lbs	14.7	207	0	0
26	Apr 2011	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	13.5 Ton	7.6 Lds	91.2 Ton	6.8	45	93	26
15Aa	Sep 2010	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	49,700 Gal	9.1 Lds	63,700 Gal	1.3	268	94	353
15Aa	Apr 2011	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	1-yr P	13.5 Ton	4.3 Lds	51.6 Ton	3.8	45	93	26
15Ab	Apr 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	49,700 Gal	33.9 Lds	237,300 Gal	4.8	268	94	353
18a	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,510 Lbs	7.8	207	0	0
18a	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,510 Lbs	7.8	207	0	0
18a	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,510 Lbs	7.8	207	0	0
18b	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		1,935 Lbs	4.3	207	0	0
18b	Apr 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	38.6 Lds	270,200 Gal	4.6	315	111	414
18b	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		1,935 Lbs	4.3	207	0	0
18b	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		1,935 Lbs	4.3	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
BR9a	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		7,176 Lbs	55.2	23	60	0
BR9a	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		9,826 Lbs	55.2	82	0	0
BR9a	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		7,176 Lbs	55.2	23	60	0
BR9a	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		9,826 Lbs	55.2	82	0	0
BR9a	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		9,826 Lbs	55.2	82	0	0
BR9a	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		7,176 Lbs	55.2	23	60	0
21	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		1,485 Lbs	3.3	207	0	0
21	Apr 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	27.5 Lds	192,500 Gal	3.3	315	111	414
21	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		1,485 Lbs	3.3	207	0	0
BR9b	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		9,398 Lbs	52.8	82	0	0
BR9b	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,864 Lbs	52.8	23	60	0
BR9b	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		9,398 Lbs	52.8	82	0	0
BR9b	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,864 Lbs	52.8	23	60	0
BR9b	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		9,398 Lbs	52.8	82	0	0
BR9b	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,864 Lbs	52.8	23	60	0
BR9c	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		5,482 Lbs	30.8	82	0	0
BR9c	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,004 Lbs	30.8	23	60	0
BR9c	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		5,482 Lbs	30.8	82	0	0
BR9c	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,004 Lbs	30.8	23	60	0
BR9c	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,004 Lbs	30.8	23	60	0
BR9c	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		5,482 Lbs	30.8	82	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
20A	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		2,400 Lbs	16.0	0	0	90
20A	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		9,280 Lbs	16.0	197	0	0
20A	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		9,280 Lbs	16.0	197	0	0
20A	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		2,400 Lbs	16.0	0	0	90
20A	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		9,280 Lbs	16.0	197	0	0
20A	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		2,400 Lbs	16.0	0	0	90
BR4	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		1,086 Lbs	6.1	82	0	0
BR4	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		793 Lbs	6.1	23	60	0
BR4	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		1,086 Lbs	6.1	82	0	0
BR4	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		793 Lbs	6.1	23	60	0
BR4	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		1,086 Lbs	6.1	82	0	0
BR4	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		793 Lbs	6.1	23	60	0
20B	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
20B	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
20B	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		11,925 Lbs	26.5	207	0	0
BR11	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		676 Lbs	5.2	23	60	0
BR11	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		926 Lbs	5.2	82	0	0
BR11	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		676 Lbs	5.2	23	60	0
BR11	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		926 Lbs	5.2	82	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
BR11	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		926 Lbs	5.2	82	0	0
BR11	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		676 Lbs	5.2	23	60	0
34	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,424 Lbs	12.8	197	0	0
34	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		832 Lbs	12.8	12	30	0
34	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		4,685 Lbs	12.8	0	0	220
34	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,424 Lbs	12.8	197	0	0
34	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		832 Lbs	12.8	12	30	0
34	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		4,685 Lbs	12.8	0	0	220
34	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		832 Lbs	12.8	12	30	0
34	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		7,424 Lbs	12.8	197	0	0
34	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		4,685 Lbs	12.8	0	0	220
39	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		702 Lbs	10.8	12	30	0
39	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,264 Lbs	10.8	197	0	0
39	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,953 Lbs	10.8	0	0	220
39	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,264 Lbs	10.8	197	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
39	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,953 Lbs	10.8	0	0	220
39	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		702 Lbs	10.8	12	30	0
39	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,953 Lbs	10.8	0	0	220
39	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		6,264 Lbs	10.8	197	0	0
39	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		702 Lbs	10.8	12	30	0
33	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,872 Lbs	8.4	197	0	0
33	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,260 Lbs	8.4	0	0	90
33	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		546 Lbs	8.4	12	30	0
33	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,872 Lbs	8.4	197	0	0
33	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,260 Lbs	8.4	0	0	90
33	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		546 Lbs	8.4	12	30	0
33	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,872 Lbs	8.4	197	0	0
33	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		1,260 Lbs	8.4	0	0	90
33	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		546 Lbs	8.4	12	30	0
38	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		16,110 Lbs	35.8	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
38	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		16,110 Lbs	35.8	207	0	0
38	Sep 2011	Sm gr/ryegrass spring hay	Calf Shed	truck solid, Not incorporated	Custom	10 Ton	4.1 Lds	49.2 Ton	4.9	11	3	21
38	Sep 2011	Sm gr/ryegrass spring hay	Calf Barn	truck solid, Not incorporated	Custom	10 Ton	4.1 Lds	49.2 Ton	4.9	11	3	21
38	Sep 2011	Sm gr/ryegrass spring hay	Dry Stack	truck solid, Not incorporated	Custom	10 Ton	8.5 Lds	102 Ton	10.2	33	69	19
38	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		16,110 Lbs	35.8	207	0	0
35	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		810 Lbs	5.4	0	0	90
35	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		3,132 Lbs	5.4	197	0	0
35	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		351 Lbs	5.4	12	30	0
35	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		3,132 Lbs	5.4	197	0	0
35	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		810 Lbs	5.4	0	0	90
35	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		351 Lbs	5.4	12	30	0
35	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		810 Lbs	5.4	0	0	90
35	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		351 Lbs	5.4	12	30	0
35	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		3,132 Lbs	5.4	197	0	0
36	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,742 Lbs	9.9	197	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
36	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,623 Lbs	9.9	0	0	220
36	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,742 Lbs	9.9	197	0	0
36	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,623 Lbs	9.9	0	0	220
36	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		3,623 Lbs	9.9	0	0	220
36	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,742 Lbs	9.9	197	0	0
37	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,175 Lbs	11.5	207	0	0
37	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,175 Lbs	11.5	207	0	0
37	Sep 2011	Sm gr/ryegrass spring hay	Holding Pond 1	Truck Liquid, Not incorporated	1-yr P	58,300 Gal	95.8 Lds	670,600 Gal	11.5	315	111	414
37	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,175 Lbs	11.5	207	0	0
32a	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,220 Lbs	9.0	197	0	0
32a	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs		5,697 Lbs	9.0	0	0	380
32a	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		585 Lbs	9.0	12	30	0
32a	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,220 Lbs	9.0	197	0	0
32a	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		585 Lbs	9.0	12	30	0
32a	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs		5,697 Lbs	9.0	0	0	380
32a	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs		5,697 Lbs	9.0	0	0	380

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
32a	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		585 Lbs	9.0	12	30	0
32a	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		5,220 Lbs	9.0	197	0	0
32b	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		1,333 Lbs	20.5	12	30	0
32b	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		11,890 Lbs	20.5	197	0	0
32b	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		3,075 Lbs	20.5	0	0	90
32b	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		3,075 Lbs	20.5	0	0	90
32b	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		11,890 Lbs	20.5	197	0	0
32b	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		1,333 Lbs	20.5	12	30	0
32b	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs		1,333 Lbs	20.5	12	30	0
32b	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs		3,075 Lbs	20.5	0	0	90
32b	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		11,890 Lbs	20.5	197	0	0
WB1b	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,900 Lbs	30.0	23	60	0
WB1b	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		3,000 Lbs	30.0	0	0	60
WB1b	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		5,340 Lbs	30.0	82	0	0
WB1b	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		3,000 Lbs	30.0	0	0	60
WB1b	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	80 Lbs		2,400 Lbs	30.0	37	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
WB1b	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,900 Lbs	30.0	23	60	0
WB1b	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		3,900 Lbs	30.0	23	60	0
WB1b	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	80 Lbs		2,400 Lbs	30.0	37	0	0
WB1b	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		3,000 Lbs	30.0	0	0	60
WB1a	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		4,800 Lbs	48.0	0	0	60
WB1a	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,240 Lbs	48.0	23	60	0
WB1a	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		8,544 Lbs	48.0	82	0	0
WB1a	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,240 Lbs	48.0	23	60	0
WB1a	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	80 Lbs		3,840 Lbs	48.0	37	0	0
WB1a	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		4,800 Lbs	48.0	0	0	60
WB1a	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	80 Lbs		3,840 Lbs	48.0	37	0	0
WB1a	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		6,240 Lbs	48.0	23	60	0
WB1a	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs		4,800 Lbs	48.0	0	0	60
RE2	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,715 Lbs	34.3	0	0	30
RE2	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		6,105 Lbs	34.3	82	0	0
RE2	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,459 Lbs	34.3	23	60	0
RE2	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	80 Lbs		2,744 Lbs	34.3	37	0	0
RE2	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,459 Lbs	34.3	23	60	0
RE2	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,715 Lbs	34.3	0	0	30
RE2	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,715 Lbs	34.3	0	0	30
RE2	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		4,459 Lbs	34.3	23	60	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
RE2	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	80 Lbs		2,744 Lbs	34.3	37	0	0
RE1	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	228 Lbs		5,791 Lbs	25.4	105	0	0
RE1	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,270 Lbs	25.4	0	0	30
RE1	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,270 Lbs	25.4	0	0	30
RE1	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	130 Lbs		3,302 Lbs	25.4	60	0	0
RE1	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	130 Lbs		3,302 Lbs	25.4	60	0	0
RE1	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		1,270 Lbs	25.4	0	0	30
RE3	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		420 Lbs	8.4	0	0	30
RE3	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		1,495 Lbs	8.4	82	0	0
RE3	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		1,092 Lbs	8.4	23	60	0
RE3	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		1,092 Lbs	8.4	23	60	0
RE3	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		420 Lbs	8.4	0	0	30
RE3	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		1,495 Lbs	8.4	82	0	0
RE3	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		420 Lbs	8.4	0	0	30
RE3	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		1,495 Lbs	8.4	82	0	0
RE3	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		1,092 Lbs	8.4	23	60	0
RE4	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		837 Lbs	4.7	82	0	0
RE4	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		235 Lbs	4.7	0	0	30
RE4	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		611 Lbs	4.7	23	60	0
RE4	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		235 Lbs	4.7	0	0	30
RE4	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		611 Lbs	4.7	23	60	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
RE4	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs		837 Lbs	4.7	82	0	0
RE4	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs		837 Lbs	4.7	82	0	0
RE4	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs		611 Lbs	4.7	23	60	0
RE4	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs		235 Lbs	4.7	0	0	30
RE5	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	228 Lbs		616 Lbs	2.7	105	0	0
RE5	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	228 Lbs		616 Lbs	2.7	105	0	0
RE5	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	228 Lbs		616 Lbs	2.7	105	0	0
BR 12	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs		1,950 Lbs	3.9	90	230	0
BR 12	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		1,427 Lbs	3.9	0	0	220
BR 12	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,262 Lbs	3.9	197	0	0
BR 12	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,262 Lbs	3.9	197	0	0
BR 12	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		1,427 Lbs	3.9	0	0	220
BR 12	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs		1,950 Lbs	3.9	90	230	0
BR 12	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		2,262 Lbs	3.9	197	0	0
BR 12	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs		1,427 Lbs	3.9	0	0	220
BR 12	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs		1,950 Lbs	3.9	90	230	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
8	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,814 Lbs	8.3	197	0	0
8	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,814 Lbs	8.3	197	0	0
8	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		4,814 Lbs	8.3	197	0	0
8a	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		696 Lbs	1.2	197	0	0
8a	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		696 Lbs	1.2	197	0	0
8a	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs		696 Lbs	1.2	197	0	0
6	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,085 Lbs	11.3	207	0	0
6	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,085 Lbs	11.3	207	0	0
6	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		5,085 Lbs	11.3	207	0	0
4	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0
4	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0
4	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs		3,375 Lbs	7.5	207	0	0

Planned Nutrient Applications (Non-manure-spreadable Area)

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
25	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs	5 Lbs	0.1	0	0	30
25	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	18 Lbs	0.1	82	0	0
25	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	13 Lbs	0.1	23	60	0
25	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	126 Lbs	13 Lbs	0.1	23	58	0
25	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	165 Lbs	17 Lbs	0.1	76	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
25	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	30 Lbs	3 Lbs	0.1	0	0	18
25	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	176 Lbs	18 Lbs	0.1	81	0	0
25	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	13 Lbs	0.1	23	60	0
25	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs	5 Lbs	0.1	0	0	30
1	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	270 Lbs	0.6	207	0	0
1	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	270 Lbs	0.6	207	0	0
1	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	270 Lbs	0.6	207	0	0
3	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	45 Lbs	0.1	207	0	0
3	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	45 Lbs	0.1	207	0	0
3	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	45 Lbs	0.1	207	0	0
AW3	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	120 Lbs	1.2	0	0	60
AW3	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	214 Lbs	1.2	82	0	0
AW3	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	156 Lbs	1.2	23	60	0
AW3	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	156 Lbs	1.2	23	60	0
AW3	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	214 Lbs	1.2	82	0	0
AW3	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	120 Lbs	1.2	0	0	60
AW3	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	214 Lbs	1.2	82	0	0
AW3	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	156 Lbs	1.2	23	60	0
AW3	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	120 Lbs	1.2	0	0	60
AW5	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	52 Lbs	0.4	23	60	0
AW5	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	71 Lbs	0.4	82	0	0
AW5	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	40 Lbs	0.4	0	0	60
AW5	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	40 Lbs	0.4	0	0	60

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
AW5	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	71 Lbs	0.4	82	0	0
AW5	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	52 Lbs	0.4	23	60	0
AW5	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	71 Lbs	0.4	82	0	0
AW5	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	40 Lbs	0.4	0	0	60
AW5	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	52 Lbs	0.4	23	60	0
AW7	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	53 Lbs	0.3	82	0	0
AW7	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	53 Lbs	0.3	82	0	0
AW7	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	53 Lbs	0.3	82	0	0
AW7	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7 (b)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	10 Lbs	0.1	0	0	60
AW7 (b)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	13 Lbs	0.1	23	60	0
AW7 (b)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	18 Lbs	0.1	82	0	0
AW7 (b)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	13 Lbs	0.1	23	60	0
AW7 (b)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	18 Lbs	0.1	82	0	0
AW7 (b)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	10 Lbs	0.1	0	0	60
AW7 (b)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	18 Lbs	0.1	82	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
AW7 (b)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	10 Lbs	0.1	0	0	60
AW7 (b)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	13 Lbs	0.1	23	60	0
AW7 (a)	Apr 2010	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7 (a)	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7 (a)	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	53 Lbs	0.3	82	0	0
AW7 (a)	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7 (a)	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	53 Lbs	0.3	82	0	0
AW7 (a)	Apr 2011	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7 (a)	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	39 Lbs	0.3	23	60	0
AW7 (a)	Apr 2012	Fescue hay maint	0-0-60	Surface broadcast	1-yr K	100 Lbs	30 Lbs	0.3	0	0	60
AW7 (a)	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	53 Lbs	0.3	82	0	0
12	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	45 Lbs	0.1	207	0	0
12	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	45 Lbs	0.1	207	0	0
13 (a)	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	225 Lbs	0.5	207	0	0
13 (a)	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	225 Lbs	0.5	207	0	0
13 (a)	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	225 Lbs	0.5	207	0	0
18a	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	180 Lbs	0.4	207	0	0
18a	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	180 Lbs	0.4	207	0	0
18a	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	180 Lbs	0.4	207	0	0
18b	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0
18b	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0
18b	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0
BR9a	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	247 Lbs	1.9	23	60	0
BR9a	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	338 Lbs	1.9	82	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
BR9a	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	338 Lbs	1.9	82	0	0
BR9a	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	247 Lbs	1.9	23	60	0
BR9a	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	247 Lbs	1.9	23	60	0
BR9a	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	338 Lbs	1.9	82	0	0
BR9b	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	559 Lbs	4.3	23	60	0
BR9b	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	765 Lbs	4.3	82	0	0
BR9b	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	765 Lbs	4.3	82	0	0
BR9b	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	559 Lbs	4.3	23	60	0
BR9b	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	559 Lbs	4.3	23	60	0
BR9b	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	765 Lbs	4.3	82	0	0
BR9c	Apr 2010	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	160 Lbs	0.9	82	0	0
BR9c	Apr 2010	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	117 Lbs	0.9	23	60	0
BR9c	Apr 2011	Fescue hay maint	46-0-0	Surface broadcast	1-yr N	178 Lbs	160 Lbs	0.9	82	0	0
BR9c	Apr 2011	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	117 Lbs	0.9	23	60	0
BR9c	Apr 2012	Fescue hay maint	18-46-0	Surface broadcast	1-yr P	130 Lbs	117 Lbs	0.9	23	60	0
BR9c	Apr 2012	Fescue hay maint	46-0-0	Surface broadcast	Supp. N	178 Lbs	160 Lbs	0.9	82	0	0
20B	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	90 Lbs	0.2	207	0	0
20B	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	90 Lbs	0.2	207	0	0
20B	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	90 Lbs	0.2	207	0	0
32a	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
32a	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs	317 Lbs	0.5	0	0	380

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
32a	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	33 Lbs	0.5	12	30	0
32a	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs	317 Lbs	0.5	0	0	380
32a	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
32a	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	33 Lbs	0.5	12	30	0
32a	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	33 Lbs	0.5	12	30	0
32a	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
32a	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	633 Lbs	317 Lbs	0.5	0	0	380
32b	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	1,044 Lbs	1.8	197	0	0
32b	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	117 Lbs	1.8	12	30	0
32b	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs	270 Lbs	1.8	0	0	90
32b	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs	270 Lbs	1.8	0	0	90
32b	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	117 Lbs	1.8	12	30	0
32b	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	1,044 Lbs	1.8	197	0	0
32b	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	1,044 Lbs	1.8	197	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
32b	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	150 Lbs	270 Lbs	1.8	0	0	90
32b	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	65 Lbs	117 Lbs	1.8	12	30	0
BR 12	May 2010	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs	37 Lbs	0.1	0	0	220
BR 12	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	58 Lbs	0.1	197	0	0
BR 12	May 2010	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs	50 Lbs	0.1	90	230	0
BR 12	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	58 Lbs	0.1	197	0	0
BR 12	May 2011	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs	37 Lbs	0.1	0	0	220
BR 12	May 2011	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs	50 Lbs	0.1	90	230	0
BR 12	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	58 Lbs	0.1	197	0	0
BR 12	May 2012	Sm gr/ryegrass spring hay	0-0-60	Surf. broad./inc. after 5 days	1-yr K	366 Lbs	37 Lbs	0.1	0	0	220
BR 12	May 2012	Sm gr/ryegrass spring hay	18-46-0	Surf. broad./inc. after 5 days	1-yr P	500 Lbs	50 Lbs	0.1	90	230	0
8	May 2010	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
8	May 2011	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
8	May 2012	Sm gr/ryegrass spring hay	34-0-0	Surf. broad./inc. after 5 days	Custom	580 Lbs	290 Lbs	0.5	197	0	0
4	Jun 2010	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P ₂ O ₅ (Lbs/A)	Avail K ₂ O (Lbs/A)
4	Jun 2011	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0
4	Jun 2012	Corn silage	46-0-0	Surface broadcast	Custom	450 Lbs	135 Lbs	0.3	207	0	0

5.8. Field Nutrient Balance (Manure-spreadable Area)

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
2010	17 (B)	23.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	17 (B)	23.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	17 (B)	23.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	17 (B)	23.5	Corn silage	20	150	0	0	278	25	93	-37	25	93	-87	-193
2012	17 (B)	23.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	17 (B)	23.5	Corn silage	20	150	0	0	360	54	201	61†	79	294	-58	-85
Total	17 (B)				945	0	0	845	79	294					
2010	17 (A)	5.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	17 (A)	5.0	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	17 (A)	5.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	17 (A)	5.0	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	17 (A)	5.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	17 (A)	5.0	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
Total	17 (A)				1020	90	270	627	90	270					
2010	65	67.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	65	67.1	Corn silage	20	150	0	0	497	102	381	182	102	381	-10	95
2011	65	67.1	Sm gr/ryegrass spring hay	4	165	0	0								
2011	65	67.1	Corn silage	20	150	0	0	207	0	0	-44†	102	381	-112	-191
2012	65	67.1	Sm gr/ryegrass spring hay	4	165	0	0								
2012	65	67.1	Corn silage	20	150	0	0	207	0	0	-81†	102	381	-112	-286
Total	65				945	0	0	911	102	381					
2010	25	24.4	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	6	-126
2011	25	24.4	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	12	-126
2012	25	24.4	Fescue hay maint	3	105	60	30	104	60	30	0†	0	0	18	-126

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
Total	25			/Acre	315	180	90	314	180	90					
2010	7	8.8	Sm gr/ryegrass spring hay	4	165	0	0								
2010	7	8.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	7	8.8	Sm gr/ryegrass spring hay	4	165	0	0								
2011	7	8.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	7	8.8	Sm gr/ryegrass spring hay	4	165	0	0								
2012	7	8.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	7				945	0	0	621	0	0					
2010	1	6.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	1	6.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	1	6.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	1	6.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	1	6.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	1	6.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	1				945	0	0	621	0	0					
2010	3	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	3	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	3	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	3	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	3	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	3	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	3				945	0	0	621	0	0					
2010	2	8.9	Sm gr/ryegrass spring hay	4	165	0	0								
2010	2	8.9	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	2	8.9	Sm gr/ryegrass spring hay	4	165	0	0								

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	2	8.9	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	2	8.9	Sm gr/ryegrass spring hay	4	165	0	0								
2012	2	8.9	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	2				945	0	0	621	0	0					
2010	5	12.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	5	12.1	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	5	12.1	Sm gr/ryegrass spring hay	4	165	0	0								
2011	5	12.1	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	5	12.1	Sm gr/ryegrss flgrz+sp hay	4	180	0	0								
2012	5	12.1	Tobacco	22	175	30	90	209	30	90	-146	0	0	-19	-133
Total	5				1035	90	270	627	90	270					
2010	40 (c)	15.5	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2011	40 (c)	15.5	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2012	40 (c)	15.5	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
Total	40 (c)				315	90	90	315	90	90					
2010	40 (a)	44.6	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2011	40 (a)	44.6	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2012	40 (a)	44.6	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
Total	40 (a)				315	90	90	315	90	90					
2010	40 (b)	17.9	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2011	40 (b)	17.9	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
2012	40 (b)	17.9	Fescue hay maint	3	105	30	30	105	30	30	0	0	0	-24	-126
Total	40 (b)				315	90	90	315	90	90					
2010	10 (b)	6.4	Sm gr/ryegrass spring hay	4	165	0	0								
2010	10 (b)	6.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	10 (b)	6.4	Sm gr/ryegrass spring hay	4	165	0	0								
2011	10 (b)	6.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2012	10 (b)	6.4	Sm gr/ryegrass spring hay	4	165	0	0								
2012	10 (b)	6.4	Corn silage	20	150	0	0	522	111	414	207	111	414	-1	128
Total	10 (b)				945	0	0	936	111	414					
2010	9	6.9	Sm gr/ryegrass spring hay	4	165	0	0								
2010	9	6.9	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	9	6.9	Sm gr/ryegrass spring hay	4	165	0	0								
2011	9	6.9	Tobacco	22	175	30	90	230	70	90	-110	40	0	21	-133
2012	9	6.9	Sm gr/ryegrass spring hay	4	165	0	0								
2012	9	6.9	Tobacco	22	175	30	90	197	0	90	-134†	10	0	-28	-133
Total	9				1020	90	270	636	100	270					
2010	10 (a)	22.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	10 (a)	22.0	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	10 (a)	22.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	10 (a)	22.0	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	10 (a)	22.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	10 (a)	22.0	Corn silage	20	150	0	0	522	111	414	207	111	414	-1	128
Total	10 (a)				945	0	0	936	111	414					
2010	AW3	4.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW3	4.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW3	4.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW3				315	180	180	315	180	180					
2010	AW5	26.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW5	26.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW5	26.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW5				315	180	180	315	180	180					
2010	AW7	2.7	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
2011	AW7	2.7	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7	2.7	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7				315	180	180	315	180	180					
2010	AW7 (b)	2.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW7 (b)	2.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7 (b)	2.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7 (b)				315	180	180	315	180	180					
2010	AW7 (a)	1.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW7 (a)	1.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7 (a)	1.6	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7 (a)				315	180	180	315	180	180					
2010	12	15.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	12	15.7	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	12	15.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	12	15.7	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	12	15.7	Sm gr/ryegrass spring hay	4	165	0	0								
2012	12	15.7	Corn grain	20	120	0	0	0	0	0	-285	0	0	-49	-126
Total	12				915	0	0	414	0	0					
2010	AW8	16.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW8	16.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW8	16.5	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW8				315	180	180	315	180	180					
2010	28	10.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	28	10.7	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	28	10.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	28	10.7	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	28	10.7	Sm gr/ryegrass spring hay	4	165	0	0								

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
2012	28	10.7	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	28				945	0	0	621	0	0					
2010	11 (a)	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	11 (a)	26.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	11 (a)	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	11 (a)	26.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	11 (a)	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	11 (a)	26.5	Corn silage	20	150	0	0	271	54	73	-44	54	73	-58	-213
Total	11 (a)				945	0	0	685	54	73					
2010	11 (b)	1.4	Sm gr/ryegrass spring hay	4	165	0	0								
2010	11 (b)	1.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	11 (b)	1.4	Sm gr/ryegrass spring hay	4	165	0	0								
2011	11 (b)	1.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	11 (b)	1.4	Sm gr/ryegrass spring hay	4	165	0	0								
2012	11 (b)	1.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	11 (b)				945	0	0	621	0	0					
2010	13 (a)	18.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	13 (a)	18.0	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	13 (a)	18.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	13 (a)	18.0	Corn silage	20	150	0	0	509	106	396	194	106	396	-6	110
2012	13 (a)	18.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	13 (a)	18.0	Corn silage	20	150	0	0	207	0	0	-41†	106	396	-112	-176
Total	13 (a)				945	0	0	923	106	396					
2010	13 (b)	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2010	13 (b)	5.8	Corn silage	20	150	0	0	260	110	30	-55	110	30	-2	-256

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	13 (b)	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2011	13 (b)	5.8	Corn silage	20	150	0	0	207	0	0	-94†	110	30	-112	-286
2012	13 (b)	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2012	13 (b)	5.8	Corn silage	20	150	0	0	218	3	20	-92†	113	50	-109	-266
Total	13 (b)				945	0	0	685	113	50					
2010	14 (A)	10.9	Sm gr/ryegrass spring hay	4	165	40	0								
2010	14 (A)	10.9	Tobacco	22	175	90	90	248	130	90	-92	0	0	81	-133
2011	14 (A)	10.9	Sm gr/ryegrass spring hay	4	165	40	0								
2011	14 (A)	10.9	Tobacco	22	175	90	90	273	130	90	-67	0	0	162	-133
2012	14 (A)	10.9	Sm gr/ryegrass spring hay	4	165	40	0								
2012	14 (A)	10.9	Tobacco	22	175	90	90	248	130	90	-82†	0	0	243	-133
Total	14 (A)				1020	390	270	769	390	270					
2010	14 (B)	14.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	14 (B)	14.7	Corn silage	20	150	0	0	306	35	130	-9	35	130	-77	-156
2011	14 (B)	14.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	14 (B)	14.7	Corn silage	20	150	0	0	522	111	414	229†	146	544	-1	128
2012	14 (B)	14.7	Sm gr/ryegrass spring hay	4	165	0	0								
2012	14 (B)	14.7	Corn silage	20	150	0	0	207	0	0	-29†	146	544	-112	-158
Total	14 (B)				945	0	0	1035	146	544					
2010	26	6.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	26	6.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	26	6.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	26	6.7	Corn grain	125	120	0	0	46	94	26	-239	94	26	-1	-130
2012	26	6.7	Sm gr/ryegrass spring hay	4	165	0	0								
2012	26	6.7	Corn grain	125	120	0	0	0	0	0	-273†	94	26	-95	-156

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
Total	26				855	0	0	46	94	26					
2010	15Aa	5.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	15Aa	5.1	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	15Aa	5.1	Sm gr/ryegrass spring hay	4	165	0	0								
2011	15Aa	5.1	Corn grain	125	120	0	0	102	93	109	-183	93	109	-2	-47
2012	15Aa	5.1	Sm gr/ryegrass spring hay	4	165	0	0								
2012	15Aa	5.1	Corn grain	125	120	0	0	0	0	0	-261†	93	109	-95	-156
Total	15Aa				855	0	0	102	93	109					
2010	27	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2010	27	5.8	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	27	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2011	27	5.8	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	27	5.8	Sm gr/ryegrass spring hay	4	165	0	0								
2012	27	5.8	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	27				855	0	0	0	0	0					
2010	15Ab	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	15Ab	4.3	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	15Ab	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	15Ab	4.3	Corn grain	125	120	0	0	299	105	394	14	105	394	10	238
2012	15Ab	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	15Ab	4.3	Corn grain	125	120	0	0	0	0	0	-218†	105	394	-85	82
Total	15Ab				855	0	0	299	105	394					
2010	29 (B)	5.7	Sm gr/ryegrass spring hay	4	165	0	40								
2010	29 (B)	5.7	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
2011	29 (B)	5.7	Sm gr/ryegrass spring hay	4	165	0	40								

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	29 (B)	5.7	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
2012	29 (B)	5.7	Sm gr/ryegrass spring hay	4	165	0	40								
2012	29 (B)	5.7	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
Total	29 (B)				855	0	270	0	0	0					
2010	30	9.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	30	9.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	30	9.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	30	9.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	30	9.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	30	9.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	30				855	0	0	0	0	0					
2010	31 (b)	3.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	31 (b)	3.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	31 (b)	3.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	31 (b)	3.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	31 (b)	3.7	Sm gr/ryegrass spring hay	4	165	0	0								
2012	31 (b)	3.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	31 (b)				855	0	0	0	0	0					
2010	31 (a)	6.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	31 (a)	6.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	31 (a)	6.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	31 (a)	6.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	31 (a)	6.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	31 (a)	6.0	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	31 (a)				855	0	0	0	0	0					

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	29A	14.6	Sm gr/ryegrass spring hay	4	165	0	0								
2010	29A	14.6	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	29A	14.6	Sm gr/ryegrass spring hay	4	165	0	0								
2011	29A	14.6	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	29A	14.6	Sm gr/ryegrass spring hay	4	165	0	0								
2012	29A	14.6	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	29A				855	0	0	0	0	0					
2010	18a	7.8	Sm gr/ryegrass spring hay	4	165	0	0								
2010	18a	7.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	18a	7.8	Sm gr/ryegrass spring hay	4	165	0	0								
2011	18a	7.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	18a	7.8	Sm gr/ryegrass spring hay	4	165	0	0								
2012	18a	7.8	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	18a				945	0	0	621	0	0					
2010	18b	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	18b	4.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	18b	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	18b	4.3	Corn silage	20	150	0	0	544	119	443	229	119	443	7	157
2012	18b	4.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	18b	4.3	Corn silage	20	150	0	0	207	0	0	-33†	119	443	-105	-129
Total	18b				945	0	0	958	119	443					
2010	BR9a	55.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9a	55.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9a	55.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9a				315	180	0	315	180	0					

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	21	3.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	21	3.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	21	3.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	21	3.3	Corn silage	20	150	0	0	522	111	414	207	111	414	-1	128
2012	21	3.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	21	3.3	Corn grain	20	120	0	0	0	0	0	-215†	111	414	-49	2
Total	21				915	0	0	729	111	414					
2010	BR9b	52.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9b	52.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9b	52.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9b				315	180	0	315	180	0					
2010	BR9c	30.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9c	30.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9c	30.8	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9c				315	180	0	315	180	0					
2010	20A	16.0	Sm gr/ryegrass spring hay	4	165	0	0								
2010	20A	16.0	Tobacco	22	175	0	90	197	0	90	-143	0	0	-49	-133
2011	20A	16.0	Sm gr/ryegrass spring hay	4	165	0	0								
2011	20A	16.0	Tobacco	22	175	0	90	197	0	90	-143	0	0	-49	-133
2012	20A	16.0	Sm gr/ryegrass spring hay	4	165	0	0								
2012	20A	16.0	Tobacco	22	175	0	90	197	0	90	-143	0	0	-49	-133
Total	20A				1020	0	270	591	0	270					
2010	BR4	6.1	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR4	6.1	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR4	6.1	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR4				315	180	0	315	180	0					

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	20B	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	20B	26.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	20B	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	20B	26.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	20B	26.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	20B	26.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	20B				945	0	0	621	0	0					
2010	BR11	5.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR11	5.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR11	5.2	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR11				315	180	0	315	180	0					
2010	34	12.8	Sm gr/ryegrass spring hay	4	165	0	40								
2010	34	12.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
2011	34	12.8	Sm gr/ryegrass spring hay	4	165	0	40								
2011	34	12.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
2012	34	12.8	Sm gr/ryegrass spring hay	4	165	0	40								
2012	34	12.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
Total	34				1020	90	660	627	90	660					
2010	39	10.8	Sm gr/ryegrass spring hay	4	165	0	40								
2010	39	10.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
2011	39	10.8	Sm gr/ryegrass spring hay	4	165	0	40								
2011	39	10.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
2012	39	10.8	Sm gr/ryegrass spring hay	4	165	0	40								
2012	39	10.8	Tobacco	22	175	30	180	209	30	220	-131	0	0	-19	-3
Total	39				1020	90	660	627	90	660					

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	33	8.4	Sm gr/ryegrass spring hay	4	165	0	0								
2010	33	8.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	33	8.4	Sm gr/ryegrass spring hay	4	165	0	0								
2011	33	8.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	33	8.4	Sm gr/ryegrass spring hay	4	165	0	0								
2012	33	8.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
Total	33				1020	90	270	627	90	270					
2010	38	35.8	Sm gr/ryegrass spring hay	4	165	0	80								
2010	38	35.8	Corn silage	20	150	0	240	207	0	0	-108	0	-320	-112	-286
2011	38	35.8	Sm gr/ryegrass spring hay	4	165	0	80								
2011	38	35.8	Corn silage	20	150	0	240	207	0	0	-108	0	-320	-112	-286
2012	38	35.8	Sm gr/ryegrass spring hay	4	165	0	80								
2012	38	35.8	Corn silage	20	150	0	240	219	21	11	-96	21	-309	-91	-275
Total	38				945	0	960	633	21	11					
2010	35	5.4	Sm gr/ryegrass spring hay	4	165	0	0								
2010	35	5.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	35	5.4	Sm gr/ryegrass spring hay	4	165	0	0								
2011	35	5.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	35	5.4	Sm gr/ryegrass spring hay	4	165	0	0								
2012	35	5.4	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
Total	35				1020	90	270	627	90	270					
2010	36	9.9	Sm gr/ryegrass spring hay	4	165	0	40								
2010	36	9.9	Tobacco	22	175	0	180	197	0	220	-143	0	0	-49	-3
2011	36	9.9	Sm gr/ryegrass spring hay	4	165	0	40								
2011	36	9.9	Tobacco	22	175	0	180	197	0	220	-143	0	0	-49	-3

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2012	36	9.9	Sm gr/ryegrass spring hay	4	165	0	40								
2012	36	9.9	Tobacco	22	175	0	180	197	0	220	-143	0	0	-49	-3
Total	36				1020	0	660	591	0	660					
2010	37	11.5	Sm gr/ryegrass spring hay	4	165	0	40								
2010	37	11.5	Corn silage	20	150	0	160	207	0	0	-108	0	-200	-112	-286
2011	37	11.5	Sm gr/ryegrass spring hay	4	165	0	40								
2011	37	11.5	Corn silage	20	150	0	160	207	0	0	-108	0	-200	-112	-286
2012	37	11.5	Sm gr/ryegrass spring hay	4	165	0	40								
2012	37	11.5	Corn silage	20	150	0	160	522	111	414	207	111	214	-1	128
Total	37				945	0	600	936	111	414					
2010	32a	9.0	Sm gr/ryegrass spring hay	4	165	0	80								
2010	32a	9.0	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	157
2011	32a	9.0	Sm gr/ryegrass spring hay	4	165	0	80								
2011	32a	9.0	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	314
2012	32a	9.0	Sm gr/ryegrass spring hay	4	165	0	80								
2012	32a	9.0	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	471
Total	32a				1020	90	1140	627	90	1140					
2010	32b	20.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	32b	20.5	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	32b	20.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	32b	20.5	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	32b	20.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	32b	20.5	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
Total	32b				1020	90	270	627	90	270					
2010	WB1b	30.0	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
2011	WB1b	30.0	Fescue hay maint		60	60	60	60	60	60	0	0	0		
2012	WB1b	30.0	Fescue hay maint		60	60	60	60	60	60	0	0	0		
Total	WB1b				225	180	180	225	180	180					
2010	WB1a	48.0	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	WB1a	48.0	Fescue hay maint		60	60	60	60	60	60	0	0	0		
2012	WB1a	48.0	Fescue hay maint		60	60	60	60	60	60	0	0	0		
Total	WB1a				225	180	180	225	180	180					
2010	RE2	34.3	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	6	-126
2011	RE2	34.3	Fescue hay maint		60	60	30	60	60	30	0	0	0		
2012	RE2	34.3	Fescue hay maint		60	60	30	60	60	30	0	0	0		
Total	RE2				225	180	90	225	180	90					
2010	RE1	25.4	Fescue hay maint	3	105	0	30	105	0	30	0	0	0	-54	-126
2011	RE1	25.4	Fescue hay maint		60	0	30	60	0	30	0	0	0		
2012	RE1	25.4	Fescue hay maint		60	0	30	60	0	30	0	0	0		
Total	RE1				225	0	90	225	0	90					
2010	RE3	8.4	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	6	-126
2011	RE3	8.4	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	12	-126
2012	RE3	8.4	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	18	-126
Total	RE3				315	180	90	315	180	90					
2010	RE4	4.7	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	6	-126
2011	RE4	4.7	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	12	-126
2012	RE4	4.7	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	18	-126
Total	RE4				315	180	90	315	180	90					
2010	RE5	2.7	Fescue hay maint	3	105	0	0	105	0	0	0	0	0	-54	-156
2011	RE5	2.7	Fescue hay maint	3	105	0	0	105	0	0	0	0	0	-54	-156
2012	RE5	2.7	Fescue hay maint	3	105	0	0	105	0	0	0	0	0	-54	-156
Total	RE5				315	0	0	315	0	0					
2010	BR 12	3.9	Sm gr/ryegrass spring hay	4	165	80	40								
2010	BR 12	3.9	Tobacco	22	175	150	180	287	230	220	-53	0	0	181	-3

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	BR 12	3.9	Sm gr/ryegrass spring hay	4	165	80	40								
2011	BR 12	3.9	Tobacco	22	175	150	180	287	230	220	-53	0	0	362	-3
2012	BR 12	3.9	Sm gr/ryegrass spring hay	4	165	80	40								
2012	BR 12	3.9	Tobacco	22	175	150	180	287	230	220	-53	0	0	543	-3
Total	BR 12				1020	690	660	861	690	660					
2010	8	8.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	8	8.3	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2011	8	8.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	8	8.3	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2012	8	8.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	8	8.3	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
Total	8				1020	0	0	591	0	0					
2010	8a	1.2	Sm gr/ryegrass spring hay	4	165	0	0								
2010	8a	1.2	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2011	8a	1.2	Sm gr/ryegrass spring hay	4	165	0	0								
2011	8a	1.2	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2012	8a	1.2	Sm gr/ryegrass spring hay	4	165	0	0								
2012	8a	1.2	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
Total	8a				1020	0	0	591	0	0					
2010	6	11.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	6	11.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	6	11.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	6	11.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	6	11.3	Sm gr/ryegrss flgrz+sp hay	4	180	0	0								
2012	6	11.3	Corn silage	20	150	0	0	207	0	0	-123	0	0	-112	-286

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
Total	6				960	0	0	621	0	0					
2010	4	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	4	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	4	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	4	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	4	7.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	4	7.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	4				945	0	0	621	0	0					

Field Nutrient Balance (Non-manure-spreadable Area)

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
2010	25	0.1	Fescue hay maint	3	105	60	30	105	60	30	0	0	0	6	-126
2011	25	0.1	Fescue hay maint	3	105	60	30	99	58	18	-6	-2	-12	10	-138
2012	25	0.1	Fescue hay maint	3	105	60	30	104	60	30	-1	0	0	16	-126
Total	25				315	180	90	308	178	78					
2010	1	0.6	Sm gr/ryegrass spring hay	4	165	0	0								
2010	1	0.6	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	1	0.6	Sm gr/ryegrass spring hay	4	165	0	0								
2011	1	0.6	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	1	0.6	Sm gr/ryegrass spring hay	4	165	0	0								
2012	1	0.6	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	1				945	0	0	621	0	0					
2010	3	0.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	3	0.1	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	3	0.1	Sm gr/ryegrass spring hay	4	165	0	0								
2011	3	0.1	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	3	0.1	Sm gr/ryegrass spring hay	4	165	0	0								
2012	3	0.1	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	3				945	0	0	621	0	0					
2010	AW3	1.2	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW3	1.2	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW3	1.2	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW3				315	180	180	315	180	180					
2010	AW5	0.4	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW5	0.4	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW5	0.4	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW5				315	180	180	315	180	180					
2010	AW7	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW7	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7				315	180	180	315	180	180					
2010	AW7 (b)	0.1	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW7 (b)	0.1	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7 (b)	0.1	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7 (b)				315	180	180	315	180	180					
2010	AW7 (a)	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	6	-96
2011	AW7 (a)	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	12	-96
2012	AW7 (a)	0.3	Fescue hay maint	3	105	60	60	105	60	60	0	0	0	18	-96
Total	AW7 (a)				315	180	180	315	180	180					
2010	12	0.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	12	0.1	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	12	0.1	Sm gr/ryegrass spring hay	4	165	0	0								

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2011	12	0.1	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	12	0.1	Sm gr/ryegrass spring hay	4	165	0	0								
2012	12	0.1	Corn grain	20	120	0	0	0	0	0	-285	0	0	-49	-126
Total	12				915	0	0	414	0	0					
2010	13 (a)	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	13 (a)	0.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	13 (a)	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	13 (a)	0.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	13 (a)	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	13 (a)	0.5	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	13 (a)				945	0	0	621	0	0					
2010	15Aa	1.1	Sm gr/ryegrass spring hay	4	165	0	0								
2010	15Aa	1.1	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	15Aa	1.1	Sm gr/ryegrass spring hay	4	165	0	0								
2011	15Aa	1.1	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	15Aa	1.1	Sm gr/ryegrass spring hay	4	165	0	0								
2012	15Aa	1.1	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	15Aa				855	0	0	0	0	0					
2010	15Ab	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2010	15Ab	0.5	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	15Ab	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	15Ab	0.5	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	15Ab	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	15Ab	0.5	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	15Ab				855	0	0	0	0	0					

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	29 (B)	1.2	Sm gr/ryegrass spring hay	4	165	0	40								
2010	29 (B)	1.2	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
2011	29 (B)	1.2	Sm gr/ryegrass spring hay	4	165	0	40								
2011	29 (B)	1.2	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
2012	29 (B)	1.2	Sm gr/ryegrass spring hay	4	165	0	40								
2012	29 (B)	1.2	Corn grain	125	120	0	50	0	0	0	-285	0	-90	-95	-156
Total	29 (B)				855	0	270	0	0	0					
2010	31 (b)	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2010	31 (b)	0.2	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	31 (b)	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2011	31 (b)	0.2	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	31 (b)	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2012	31 (b)	0.2	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	31 (b)				855	0	0	0	0	0					
2010	31 (a)	0.7	Sm gr/ryegrass spring hay	4	165	0	0								
2010	31 (a)	0.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2011	31 (a)	0.7	Sm gr/ryegrass spring hay	4	165	0	0								
2011	31 (a)	0.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
2012	31 (a)	0.7	Sm gr/ryegrass spring hay	4	165	0	0								
2012	31 (a)	0.7	Corn grain	125	120	0	0	0	0	0	-285	0	0	-95	-156
Total	31 (a)				855	0	0	0	0	0					
2010	18a	0.4	Sm gr/ryegrass spring hay	4	165	0	0								
2010	18a	0.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	18a	0.4	Sm gr/ryegrass spring hay	4	165	0	0								
2011	18a	0.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2012	18a	0.4	Sm gr/ryegrass spring hay	4	165	0	0								
2012	18a	0.4	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	18a				945	0	0	621	0	0					
2010	18b	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	18b	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	18b	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	18b	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	18b	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	18b	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	18b				945	0	0	621	0	0					
2010	BR9a	1.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9a	1.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9a	1.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9a				315	180	0	315	180	0					
2010	BR9b	4.3	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9b	4.3	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9b	4.3	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9b				315	180	0	315	180	0					
2010	BR9c	0.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	6	-156
2011	BR9c	0.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	12	-156
2012	BR9c	0.9	Fescue hay maint	3	105	60	0	105	60	0	0	0	0	18	-156
Total	BR9c				315	180	0	315	180	0					
2010	20B	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2010	20B	0.2	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	20B	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2011	20B	0.2	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2012	20B	0.2	Sm gr/ryegrass spring hay	4	165	0	0								
2012	20B	0.2	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	20B				945	0	0	621	0	0					
2010	32a	0.5	Sm gr/ryegrass spring hay	4	165	0	80								
2010	32a	0.5	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	157
2011	32a	0.5	Sm gr/ryegrass spring hay	4	165	0	80								
2011	32a	0.5	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	314
2012	32a	0.5	Sm gr/ryegrass spring hay	4	165	0	80								
2012	32a	0.5	Tobacco	22	175	30	300	209	30	380	-131	0	0	-19	471
Total	32a				1020	90	1140	627	90	1140					
2010	32b	1.8	Sm gr/ryegrass spring hay	4	165	0	0								
2010	32b	1.8	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2011	32b	1.8	Sm gr/ryegrass spring hay	4	165	0	0								
2011	32b	1.8	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
2012	32b	1.8	Sm gr/ryegrass spring hay	4	165	0	0								
2012	32b	1.8	Tobacco	22	175	30	90	209	30	90	-131	0	0	-19	-133
Total	32b				1020	90	270	627	90	270					
2010	BR 12	0.1	Sm gr/ryegrass spring hay	4	165	80	40								
2010	BR 12	0.1	Tobacco	22	175	150	180	287	230	220	-53	0	0	181	-3
2011	BR 12	0.1	Sm gr/ryegrass spring hay	4	165	80	40								
2011	BR 12	0.1	Tobacco	22	175	150	180	287	230	220	-53	0	0	362	-3
2012	BR 12	0.1	Sm gr/ryegrass spring hay	4	165	80	40								
2012	BR 12	0.1	Tobacco	22	175	150	180	287	230	220	-53	0	0	543	-3
Total	BR 12				1020	690	660	861	690	660					
2010	8	0.5	Sm gr/ryegrass spring hay	4	165	0	0								

Year	Field	Size	Crop	Yield Goal /Acre	Fertilizer Recs ¹			Nutrients Applied ²			Balance After Recs ³			Balance After Removal ⁴	
					N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	N Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A	P ₂ O ₅ Lb/A	K ₂ O Lb/A
					Acres										
2010	8	0.5	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2011	8	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2011	8	0.5	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
2012	8	0.5	Sm gr/ryegrass spring hay	4	165	0	0								
2012	8	0.5	Tobacco	22	175	0	0	197	0	0	-143	0	0	-49	-223
Total	8				1020	0	0	591	0	0					
2010	4	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2010	4	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2011	4	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2011	4	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
2012	4	0.3	Sm gr/ryegrass spring hay	4	165	0	0								
2012	4	0.3	Corn silage	20	150	0	0	207	0	0	-108	0	0	-112	-286
Total	4				945	0	0	621	0	0					

¹ Fertilizer Recs are the crop fertilizer recommendations. The N rec accounts for any N credit from previous legume crop.

² Nutrients Applied are the nutrients expected to be available to the crop from that year's manure applications plus nutrients from that year's commercial fertilizer applications and nitrates from irrigation water. With a double-crop year, the total nutrients applied for both crops and the year's balances are listed on the second crop's line.

³ For N, Nutrients Applied minus Fertilizer Recs for indicated crop year. Also includes amount of residual N expected to become available that year from prior years' manure applications. For P₂O₅ and K₂O, Nutrients Applied minus Fertilizer Recs *through* the indicated crop year, with positive balances carried forward to subsequent years. Negative values indicate a potential need to apply additional nutrients.

⁴ Nutrients Applied minus amount removed by harvested portion of crop through the indicated year. Positive balances are carried forward to subsequent years.

☒ Indicates a custom fertilizer recommendation in the Fertilizer Recs column.

^ Indicates in the Balance After Recs N column that the legume crop is assumed to utilize some or all of the supplied N.

† Indicates in the Balance After Recs N column that the value includes residual N expected to become available that year from prior years' manure applications.

5.9. Manure Inventory Annual Summary

Manure Source	Plan Period	On Hand at Start of Period	Total Generated	Total Imported	Total Transferred In	Total Applied	Total Exported	Total Transferred Out	On Hand at End of Period	Units
Holding Pond 1	Nov '09 - Oct '10	2,000,000	3,196,786	0	0	4,930,100	0	0	266,686	Gal
Dry Stack	Nov '09 - Oct '10	0	248	0	0	196	0	0	52	Ton
Calf Barn	Nov '09 - Oct '10	0	120	0	0	109	0	0	11	Ton
Calf Shed	Nov '09 - Oct '10	0	120	0	0	109	0	0	11	Ton
All Sources (liquid)	Nov '09 - Oct '10	2,000,000	3,196,786	0	0	4,930,100	0	0	266,686	Gal
All Sources (solid)	Nov '09 - Oct '10	0	488	0	0	414	0	0	74	Ton
Holding Pond 1	Nov '10 - Oct '11	266,686	3,196,786	0	0	3,196,900	0	0	266,572	Gal
Dry Stack	Nov '10 - Oct '11	52	248	0	0	275	0	0	26	Ton
Calf Barn	Nov '10 - Oct '11	11	120	0	0	120	0	0	11	Ton
Calf Shed	Nov '10 - Oct '11	11	120	0	0	120	0	0	11	Ton
All Sources (liquid)	Nov '10 - Oct '11	266,686	3,196,786	0	0	3,196,900	0	0	266,572	Gal
All Sources (solid)	Nov '10 - Oct '11	74	488	0	0	515	0	0	47	Ton
Holding Pond 1	Nov '11 - Oct '12	266,572	3,196,786	0	0	1,864,800	0	0	1,598,558	Gal
Dry Stack	Nov '11 - Oct '12	26	248	0	0	144	0	0	130	Ton
Calf Barn	Nov '11 - Oct '12	11	120	0	0	71	0	0	60	Ton
Calf Shed	Nov '11 - Oct '12	11	120	0	0	71	0	0	60	Ton
All Sources (liquid)	Nov '11 - Oct '12	266,572	3,196,786	0	0	1,864,800	0	0	1,598,558	Gal
All Sources (solid)	Nov '11 - Oct '12	47	488	0	0	286	0	0	250	Ton

5.10. Fertilizer Material Annual Summary

Product Analysis	Plan Period	Product Needed Nov - Dec	Product Needed Jan - Aug	Product Needed Sep - Oct	Total Product Needed	Units
34-0-0	Nov '09 - Oct '10	0	83,520	0	83,520	Lbs
18-46-0	Nov '09 - Oct '10	0	63,510	0	63,510	Lbs
0-0-60	Nov '09 - Oct '10	0	55,034	0	55,034	Lbs
46-0-0	Nov '09 - Oct '10	0	246,148	0	246,148	Lbs
34-0-0	Nov '10 - Oct '11	0	83,520	0	83,520	Lbs
18-46-0	Nov '10 - Oct '11	0	61,851	0	61,851	Lbs
0-0-60	Nov '10 - Oct '11	0	53,244	0	53,244	Lbs
46-0-0	Nov '10 - Oct '11	0	232,335	0	232,335	Lbs
34-0-0	Nov '11 - Oct '12	0	83,520	0	83,520	Lbs
18-46-0	Nov '11 - Oct '12	0	63,061	0	63,061	Lbs
0-0-60	Nov '11 - Oct '12	0	55,034	0	55,034	Lbs
46-0-0	Nov '11 - Oct '12	0	224,010	0	224,010	Lbs

5.11. Whole-farm Nutrient Balance (Manure-spreadable Area)

	N (Lbs)	P ₂ O ₅ (Lbs)	K ₂ O (Lbs)
Total Manure Nutrients on Hand at Start of Plan ¹	23,800	3,800	14,200
Total Manure Nutrients Collected ²	122,242	23,571	71,017
Total Manure Nutrients Imported ³	0	0	0
Total Manure Nutrients Exported ⁴	0	0	0
Total Manure Nutrients on Hand at End of Plan ⁵	20,422	3,968	11,848
Total Manure Nutrients Applied ⁶	125,834	23,467	73,491
Available Manure Nutrients Applied ⁷	67,286	23,467	73,491
Commercial Fertilizer Nutrients Applied ⁸	435,728	84,960	96,499
Available Nutrients Applied ⁹	503,014	108,427	169,990
Nutrient Utilization Potential ¹⁰	660,416	243,668	628,911
Nutrient Balance of Spreadable Acres ^{11*}	-157,402	-135,241	-458,921
Average Nutrient Balance per Spreadable Acre per Year ^{12*}	-52	-44	-151

1. Values indicate total manure nutrients present in storage(s) at the beginning of the plan.
2. Values indicate total manure nutrients collected on the farm.
3. Values indicate total manure nutrients imported onto the farm.
4. Values indicate total manure nutrients exported from the farm to an external operation.
5. Values indicate total manure nutrients present in storage(s) at the end of plan.
6. Values indicate total nutrients present in land-applied manure. Losses due to rate, timing and method of application are not included in these values.
7. Values indicate available manure nutrients applied on the farm based on rate, time and method of application. These values are based on the total manure nutrients applied (row 6) after accounting for state-specific nutrient losses due to rate, time and method of application.
8. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.
9. Values are the sum of available manure nutrients applied (row 7) and commercial fertilizer nutrients applied (row 8).
10. Values indicate nutrient utilization potential of crops grown. For N the value generally is based on crop N recommendation for non-legume crops and crop N uptake or other state-imposed limit for N application rates for legumes. P₂O₅ and K₂O values generally are based on fertilizer recommendations or crop removal (whichever is greatest).
11. Values indicate available nutrients applied (row 9) minus crop nutrient utilization potential (row 10). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.
12. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres (row 11) by the number of spreadable acres in plan and by the length of the plan in years. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P₂O₅ and/or K₂O do not necessarily indicate that the plan was not developed properly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P₂O₅ and K₂O indicate that planned applications to some fields are less than crop removal rates.

Whole-farm Nutrient Balance (Non-manure-spreadable Area)

	N (Lbs)	P ₂ O ₅ (Lbs)	K ₂ O (Lbs)
Commercial Fertilizer Nutrients Applied ¹	6,347	1,986	1,544
Nutrient Utilization Potential ²	11,474	1,986	1,869
Nutrient Balance of Non-spreadable Acres ^{3*}	-5,127	0	-325
Average Nutrient Balance per Non-spreadable Acre per Year ^{4*}	-92	0	-6

1. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.
2. Values indicate nutrient utilization potential of crops grown based on crop fertilizer recommendations.

3. Values indicate commercial fertilizer nutrients applied (row 1) minus crop nutrient utilization potential (row 2). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.

4. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of non-spreadable acres (row 3) by number of non-spreadable acres in plan. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. Positive values for P₂O₅ and/or K₂O do not necessarily indicate that the plan was not developed properly. For example, multiple year applications may have been planned during the final plan year(s) and these nutrients will not be utilized by crops in the current plan. Negative values for P₂O₅ and K₂O indicate that applications to some fields may have been delayed to allow the producer to apply the nutrients in accordance with their fertilization schedule.

Section 6. Record Keeping

This section includes a list of key records that the operator should keep in order to document and verify implementation of the procedures in this CNMP. Records should be kept for a minimum of 5 years, or for the length of the contract, rotation or permit, whichever is longer, for each field where manure is applied.

These general records include but are not limited to:

- ◆ Soil test results
- ◆ Weather and soil conditions 24 hours prior to, during, and 24 hours after application of manure, chemicals and pesticides
- ◆ Documentation (can be verbal) of arrangements for land injection on land not owned by the grower
- ◆ Type, quantities, and sources of all nutrients generated and collected
- ◆ Type, quantities, and sources of all nutrients applied to each field
- ◆ Dates of manure applications
- ◆ Analysis of manure prior to application and test method used
- ◆ Analysis of the manure transferred, where applicable
- ◆ Dates manure was transferred, where applicable and to whom
- ◆ Amount of manure transferred, where applicable
- ◆ Inspection reports
- ◆ Preside Dress Soil Nitrate Testing (PSNT), where applicable
- ◆ Operation and Maintenance records of conservation practices and equipment
- ◆ Restricted pesticides used to meet label requirements
- ◆ Equipment Calibration records
- ◆ Crops planted, tillage methods, and dates planted
- ◆ Crop harvest dates and yields
- ◆ Conservation practices and management activities and implemented
- ◆ Adjustments to the nutrient management plan based on records and changes in farming operations as appropriate.
- ◆ Changes to the CNMP
- ◆ Weekly check of volume left in pit
- ◆ Annual visual inspection of retention structure (the pits), animal holding areas, if applicable and land application areas.
- ◆ Records of mortalities and how managed

Section 7. Actual Test Results



A&L Analytical Laboratories, Inc.

Liquid

2790 Whitten Rd. Memphis, TN 38133 (901) 213-2400 Fax (901) 213-2440

LAND APPLICATION ANALYSIS

Client :
HICKORY-CORNER DAIRY
ANN SHIPLEY
2160 SHARP RD.

SPEEDWELL , TN 37870

Grower :
Analytical Testing

PO :

Report No: 09-163-0229
Cust No: 18113
Date Printed: 06/22/2009
Page : 1 of 1
Date Recd : 6/12/2009

Lab Number : 68808 Sample Id : 1

Test	Analysis		Pounds Per 1000 Gallons	
	As Received	Dry Basis	As Received	Dry Basis
Nitrogen, N %	0.140		11.9	
Phosphorus, P %	0.01		1.95 P ₂ O ₅	
Potassium, K %	0.07		7.14 K ₂ O	
Sulfur, S				
Magnesium, Mg				
Calcium, Ca				
Sodium, Na				
Iron, Fe				
Aluminum, Al				
Manganese, Mn				
Copper, Cu				
Zinc, Zn				
Boron, B				

Test	Result	Additional Information	Result
Moisture %	99.1	Type	As Received
Solid %	0.9		

Comments :

RMMA Recommended Methods of Manure Analysis, Peters et al, 2002, In Press
SW USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed.
Current Revision

M. Scott McKee, Technical Director



A&L Analytical Laboratories, Inc.

Solid

2790 Whitten Rd. Memphis, TN 38133 (901) 213-2400 Fax (901) 213-2440

LAND APPLICATION ANALYSIS

Client :
HICKORY-CORNER DAIRY
ANN SHIPLEY
2160 SHARP RD.

SPEEDWELL , TN 37870

Grower :
Analytical Testing

PO :

Report No: 09-163-0230
Cust No: 18113
Date Printed: 06/22/2009
Date Recd : 6/12/2009

Page : 1 of 1

Lab Number : 68809 Sample Id : 2

Test	Analysis		Pounds Per Ton	
	As Received	Dry Basis	As Received	Dry Basis
Nitrogen, N %	0.410		8.20	
Phosphorus, P %	0.15		6.89 P ₂ O ₅	
Potassium, K %	0.08		1.92 K ₂ O	
Sulfur, S				
Magnesium, Mg				
Calcium, Ca				
Sodium, Na				
Iron, Fe				
Aluminum, Al				
Manganese, Mn				
Copper, Cu				
Zinc, Zn				
Boron, B				

Test	Result	Additional Information	Result
Moisture %	81.3	Type	Dry Basis
Solid %	18.7		

Comments :

RMMA Recommended Methods of Manure Analysis, Peters et al, 2002, In Press
SW USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed.
Current Revision

M. Scott McKee, Technical Director



A&L Analytical Laboratories, Inc.

2790 Whitten Rd. Memphis, TN 38133 (901) 213-2400 Fax (901) 213-2440

LAND APPLICATION ANALYSIS

Client :
HICKORY-CORNER DAIRY
Jim Shipley
2160 SHARP RD.

SPEEDWELL , TN 37870

Grower :

PO :

Report No: 08-007-9230
Cust No: 18113
Date Printed: 01/24/2008
Page : 1 of 2

Date Recd : 1/24/2008

Lab Number : 99050 Sample Id : 1

Test	Analysis		Pounds Per 1000 Gallons	
	As Received	Dry Basis	As Received	Dry Basis
Nitrogen, N %	0.490		41.650	
Phosphorus, P %	0.122		23.851 P ₂ O ₅	
Potassium, K %	0.079		8.058 K ₂ O	
Sulfur, S				
Magnesium, Mg				
Calcium, Ca				
Sodium, Na				
Iron, Fe				
Aluminum, Al				
Manganese, Mn				
Copper, Cu				
Zinc, Zn				
Boron, B				

Test	Result	Additional Information	Result
Moisture %	80.700	Type	As Received
Solid %	19.300		

Comments :

RMMA Recommended Methods of Manure Analysis, Peters et al, 2002, In Press

SW USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed.
Current Revision



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LAND APPLICATION ANALYSIS

Client :
HICKORY-CORNER DAIRY
Jim Shipley
2160 SHARP RD.

Grower :

SPEEDWELL , TN 37870

PO :

Report No: 08-007-0230
Cust No: 18113
Date Printed: 01/22/2008
Date Recd : 1/7/2008

Page : 1 of 2

Lab Number : 99050 Sample Id : 1

Test	Analysis		Pounds Per Ton	
	As Received	Dry Basis	As Received	Dry Basis
Nitrogen, N %	0.490		9.801	
Phosphorus, P %	0.134		6.161 P ₂ O ₅	
Potassium, K %	0.086		2.066 K ₂ O	
Sulfur, S				
Magnesium, Mg				
Calcium, Ca				
Sodium, Na				
Iron, Fe				
Aluminum, Al				
Manganese, Mn				
Copper, Cu				
Zinc, Zn				
Boron, B				

Test	Result	Additional Information	Result
Moisture %	80.700	Type	Dry Basis
Solid %	19.300		

Comments :

RMMA Recommended Methods of Manure Analysis, Peters et al, 2002, In Press

SW USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed.
Current Revision



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LAND APPLICATION ANALYSIS

Client :
HICKORY-CORNER DAIRY
Jim Shipley
2160 SHARP RD.

SPEEDWELL , TN 37870

Grower :

PO :

Report No: 08-007-0230
Cust No: 18113
Date Printed: 01/22/2008
Date Recd : 1/7/2008

Page : 2 of 2

Lab Number : 99051 Sample Id : 2

Test	Analysis		Pounds Per Ton	
	As Received	Dry Basis	As Received	Dry Basis
Nitrogen, N %	0.140		2.800	
Phosphorus, P %	0.006		0.276 P ₂ O ₅	
Potassium, K %	0.088		2.112 K ₂ O	
Sulfur, S				
Magnesium, Mg				
Calcium, Ca				
Sodium, Na				
Iron, Fe				
Aluminum, Al				
Manganese, Mn				
Copper, Cu				
Zinc, Zn				
Boron, B				

Test	Result	Additional Information	Result
Moisture %	99.200	Type	Dry Basis
Solid %	0.800		

Comments :

RMMA Recommended Methods of Manure Analysis, Peters et al, 2002, In Press

SW USEPA, SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, 3rd Ed.
Current Revision

M. Scott McKee, Technical Director



SOIL TEST REPORT

JIM SHIPLEY
2160 SHARP ROAD

SPEEDWELL, TN 37870

Deborah K. Joines
Deborah K. Joines
Manager
Soil, Plant and Pest Center
5201 Marchant Drive
Nashville, TN 37211-5112
(615) 832-5850
soilplantpestcenter@utk.edu

Date Tested: 1/14/2009

County: Claiborne

Lab Number: 353501

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	1	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.8		196 V	363 V	2679	310								
Organic Matter %	Soluble Salts PPM**	Sulfur											

RECOMMENDATIONS

1

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353502

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	2	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
7.1		111 H	339 V	2498	592								

SHIPLEY - Page 1

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Organic Matter %	Soluble Salts PPM**	Sulfur
------------------	---------------------	--------

RECOMMENDATIONS		
2	Fertilizer/Lime Application Rate and Timing	

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353503

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	3	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.6	240	V	216 H	3586	553								
Organic Matter %	Soluble Salts PPM**	Sulfur											

RECOMMENDATIONS		
3	Fertilizer/Lime Application Rate and Timing	

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 2

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

Mehlich 1 SOIL TEST RESULTS and RATINGS*									Lab Number: 353504			
Sample ID		(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.8	303	V	341	V	3580	661						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS											
4		Fertilizer/Lime Application Rate and Timing									

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

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If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

Mehlich 1 SOIL TEST RESULTS and RATINGS*									Lab Number: 353505			
Sample ID		(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
7.1	242	V	748	V	3206	611						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS											
6		Fertilizer/Lime Application Rate and Timing									

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 3

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

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Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353506

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	7	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.9	192	V	336	V	2933	670							
Organic Matter %	Soluble Salts PPM**		Sulfur										

RECOMMENDATIONS

7

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353507

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	10	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.7	72	H	252	H	2599	572							

SHIPLEY - Page 4

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

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Organic Matter %	Soluble Salts PPM*	Sulfur
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RECOMMENDATIONS

10

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353508

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID 11

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.6	46	H	188 H	2027	620							
Organic Matter %	Soluble Salts PPM*	Sulfur										

RECOMMENDATIONS

11

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 5

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353509

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	12	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.6	114	H	215 H	2179	607							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

12

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353510

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	13	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.1	53	H	187 H	2298	444							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

13

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 6

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

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Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353511

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	14B	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.8	77	H	285	H	2232	582						
Organic Matter %	Soluble Salts PPM**	Sulfur										

RECOMMENDATIONS

14B

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353512

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	17B	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.7	109	H	430	V	2012	663						

SHIPLEY - Page 7

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Organic Matter %	Soluble Salts PPM*	Sulfur
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RECOMMENDATIONS

17B

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353513

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	18	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.8	214	V	355 V	2894	657								
Organic Matter %	Soluble Salts PPM*	Sulfur											

RECOMMENDATIONS

18

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 8

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353514

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	20A	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
7.0	184	V	270 H	4068	662							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

20A

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353515

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	20B	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.3	146	V	257 H	2561	480							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

20B

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 9

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353516

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID		(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
7.0	126	V	253 H	2792	599								
Organic Matter %	Soluble Salts PPM**		Sulfur										

RECOMMENDATIONS

21

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353517

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID		(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.4	144	V	287 H	2265	664								

SHIPLEY - Page 10

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Organic Matter %	Soluble Salts PPM*	Sulfur
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RECOMMENDATIONS

26

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353518

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID 27

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.7	218	V	353	V	3391	981						
Organic Matter %	Soluble Salts PPM*	Sulfur										

RECOMMENDATIONS

27

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 0 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 11

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353519

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	28	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.5	163	V	281	H	2280	720						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

28

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353520

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	29A	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.6	167	V	271	H	2713	784						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

29A

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 100 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 12

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

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Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353521

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	29B	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.7	195	V	127 M	3282	1034								
Organic Matter %	Soluble Salts PPM**		Sulfur										

RECOMMENDATIONS

29B

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 0 / 160 pounds per acre

Limestone: Lime is not recommended at this time
Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353522

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	30	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
5.9	7.3	95 H	228 H	2144	677								

SHIPLEY - Page 13

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Organic Matter %	Soluble Salts PPM*	Sulfur
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RECOMMENDATIONS

30

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: 2 tons per acre

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353523

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID 31

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.6	93	H	232 H	2761	688							
Organic Matter %	Soluble Salts PPM*	Sulfur										

RECOMMENDATIONS

31

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 14

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353524

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	37	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.6	70	H	141	M	1668	462						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

37

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 160 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353525

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	38	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.7	85	H	79	L	2028	468						
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

38

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 300 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 15

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353526

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	RE1	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.3	112	H	132 M	968	275								
Organic Matter %	Soluble Salts PPM**		Sulfur										

RECOMMENDATIONS

RE1

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 160 pounds per acre

Limestone: Lime is not recommended at this time
Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353527

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	9	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
5.6	7.3	31	H	204 H	1542	334							
Organic Matter %	Soluble Salts PPM**		Sulfur										

RECOMMENDATIONS

9

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 120 pounds per acre

Limestone: 2.5 tons per acre

SHIPLEY - Page 16

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353528

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.2	27	M	206 H	1898	500							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

14A

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 90 / 120 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353529

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.5	74	H	257 H	2126	588							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

17A

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 120 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353530

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.4	37	H	237 H	1461	328							

SHIPLEY - Page 17

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Organic Matter %	Soluble Salts PPM**	Sulfur
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RECOMMENDATIONS

33

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 120 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353531

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID 36

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.3	126	V	103 M	1524	263							
Organic Matter %	Soluble Salts PPM**	Sulfur										

RECOMMENDATIONS

36

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 0 / 180 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353532

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID 5

(Pounds Per Acre)

Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.1	86	H	229 H	1564	284							
Organic Matter %	Soluble Salts PPM**	Sulfur										

RECOMMENDATIONS

5

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 120 pounds per acre

Limestone: Lime is not recommended at this time

SHIPLEY - Page 18

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

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Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353533

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.8	37	H	127 M	1949	583							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

39

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 180 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353534

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.2	15	L	119 M	1490	326							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

BR12

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 150 / 180 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353535

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.3	83	H	169 H	1458	368							

SHIPLEY - Page 19

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Organic Matter %	Soluble Salts PPM*	Sulfur
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RECOMMENDATIONS

32

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353536

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	32A	(Pounds Per Acre)											
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)	
6.7	109	H	89 L	1604	340								
Organic Matter %	Soluble Salts PPM*	Sulfur											

RECOMMENDATIONS

32A

Fertilizer/Lime Application Rate and Timing

Corn Silage 19-25 T/A

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 240 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

SHIPLEY - Page 20

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

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If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

County: Claiborne

Lab Number: 353537

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	8	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.4		77 H	275 H	2209	395							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

8

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 60 / 120 pounds per acre

Limestone: Lime is not recommended at this time

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353538

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	RE6	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
5.8	7.3	235 V	458 V	1180	168							
Organic Matter %	Soluble Salts PPM**		Sulfur									

RECOMMENDATIONS

RE6

Fertilizer/Lime Application Rate and Timing

Tobacco, Burley

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150-200 / 0 / 0 pounds per acre

Limestone: 2.5 tons per acre

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

County: Claiborne

Lab Number: 353539

Mehlich 1 SOIL TEST RESULTS and RATINGS*

Sample ID	65	(Pounds Per Acre)										
Water pH	Buffer Value	P Phosphorus	K Potassium	Ca Calcium	Mg Magnesium	Zn Zinc	Cu Copper	Fe Iron	Mn Manganese	B Boron	Na Sodium	Nitrates (ppm)
6.3		38 H	211 H	1998	439							

SHIPLEY - Page 21

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Organic Matter %	Soluble Salts PPM**	Sulfur	RECOMMENDATIONS
65		Fertilizer/Lime Application Rate and Timing	
Corn Silage 19-25 T/A			

N / P₂O₅ / K₂O

Nitrogen/Phosphate/Potash: 150 / 60 / 100 pounds per acre

Limestone: Lime is not recommended at this time

Banding a portion or all of the phosphate and potash two inches to the side and below the seed level may result in increased yields on soils testing low in either or both phosphorous and potassium. For soils testing medium or higher, either banding or broadcasting are effective methods of application. If fertilizer is placed directly with the seed, do not apply more than 30 pounds per acre of nitrogen or nitrogen plus potash to prevent seedling injury and loss of stand.

Split applications of nitrogen may be beneficial when nitrogen rates are greater than 120 pounds per acre.

If nitrogen sources containing urea are not incorporated, some loss of nitrogen may occur if applied to moist soils followed by three or more days of rapidly drying conditions without rainfall.

Reduce nitrogen rates following leguminous cover crops. A good crop of crimson clover or hairy vetch in early bloom stage will supply about 50-70 pounds per acre of nitrogen.

If zinc was tested and is below 2 pounds per acre, apply five pounds of zinc (approximately 15 pounds zinc sulfate) per acre just prior to planting.

SHIPLEY - Page 22

*Ratings: Indicates relative availability of nutrients to plants. (See back of this form for detailed explanation.)

**PPM = Parts per Million

If you have questions about these recommendations, contact your County Extension office.

Visit our web site at <http://soilplantandpest.utk.edu> for additional information.

Section 8. Closure Plan

Jim Shipley will remove all waste from the stack pad upon closure of this facility. Manure will be applied based on the current nutrient management plan upon that future date.

Outline for Closure Plan

Purpose

Provide a brief description to the owner(s)/operator(s), of where the plan is to be submitted, and the standards/criteria by which the plan will be prepared to meet, if, and when, the site is closed.

Location

Provide site map, direction to the site, and an indication of the watershed where the runoff flows.

Description of the Operation

Describe the general soils at the site(s), the acres available to receive manure, indicate soil test results, RUSLE, LI, setback/buffer requirements, etc.

Determine the total volume of manure to be removed, and obtain a current manure test results.

Closure Description

Describe in detail how to close the facility all manure that will be land applied as instructed that a revised Nutrient Management Plan be prepared.

Assessment and Documentation of Site (land where manure) will be applied

1. Obtain a current soil test on each field receiving manure.
2. Run the Phosphorus Index (PI) on each field receiving manure.
3. Identify and delineate sensitive areas.
4. Determine the extent to which cultural resources will be impacted.
5. Determine the existing level of conservation treatment on each field where manure will be applied.
6. Determine if additional conservation treatment is needed to meet criteria on each field where manure will be applied.
7. Run RUSLE on each field receiving letter.
8. Provide Leaching Index (LI) results (if applicable for each field receiving letter).

Allocations

Allocate manure according to NRCS criteria outlined in the NRCS Waste Utilization Standard, Code 633 and manage nutrients according to NRCS Nutrient Management Standard, Code 590, based upon updated manure, letter and soil tests, crop(s) where materials will be applied.

Section 9. References

10.1. Publications

Animal Waste

AWMFH Chapter 4, Table 4-12, March 2008

AWMFH Chapter 4, Table 4-5(b), March 2008

Crop Fertilizer Recommendations

"Lime and Fertilizer Recommendations for the Various Crops of Tennessee," BEES Info #100, Aug 2008
<http://soilplantandpest.utk.edu/publications/soilfertilizerpubs.htm>

"Lime and Fertilizer Recommendations for the Various Crops of Tennessee," BEES Info #100, Feb 2009
<http://soilplantandpest.utk.edu/publications/soilfertilizerpubs.htm>

Manure Application Setback Features/Distances

TN DEQ Rule 1200-4-5-.14(17)(d)
<http://www.state.tn.us/sos/rules/1200/1200-04/1200-04-05.pdf>

Manure Nutrient Availability

"Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94
http://wastemgmt.ag.utk.edu/ExtensionProjects/extension_publications.htm

Phosphorus Assessment

"Tennessee Phosphorus Index," Tennessee NRCS, Nov. 2001

Practice Standards

Tennessee NRCS Nutrient Management Standard (590), Jan. 2003
[http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_\(590\)_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)

10.2. Software and Data Sources

MMP Version	MMP 0.2.8.0
MMP Plan File	11/2/2009 9:43:45 AM
MMP Initialization File for Tennessee	6/4/2009
MMP Soils File for Tennessee	6/2/2009
Phosphorus Index Tool Version	2009.02.20
NRCS Conservation Plan(s)	

10.3. Operation and Maintenance

General

Operation and maintenance of structural, non-structural, and land treatment measures requires effort and expenditures throughout the life of the practice(s) to maintain safe conditions and assure proper functioning. Operation includes the administration, management, and performance of non-maintenance actions needed to keep a completed practice safe and functioning as planned. Maintenance includes work to prevent deterioration of practices, repairing damage, or replacement of the practice(s) if one or more components fail. Listed below is the operation and maintenance plan for the structural, non-structural, and land treatment measures for this operation.

Concrete in the buildings should be checked for signs of cracking. If cracks are discovered they must be repaired immediately. Hairline cracks are expected and should pose no problem.

Waste Storage Facility - Manure Pack Storage

Waste Storage Facility –Roofed Storage Facilities

Trusses/roof supports shall be examined during/after snowfall and high wind events. Excessive snow loads may require removal. Damage from high winds may cause structural damage to the truss/roof supports. Roof materials shall be replaced as wear/leakage occurs. Metal roofing may require periodic painting. Gutters and Downspouts shall be maintained.

Fence

Fences and gates will be inspected often and repaired promptly. Electric twine can be used if it becomes necessary to subdivide the herd lots and to prevent the development of denuded areas.

Pond

Earthen slopes shall be checked for rills and gullies. Seeding shall be as necessary to maintain a grass cover. Weeds shall be controlled. The top of dam and outside slopes shall be mowed annually to discourage weed growth, control woody vegetation, and allow closer examination of the earth embankment. Quickly remove woody vegetation that begins to grow on the embankment to prevent root establishment.

Earthen slopes shall be checked for soft or damp/wet areas that may be a sign of potential leakage. Burrowing animals in the slopes shall be controlled. Animals shall be immediately removed and the burrow holes filled.

Exclude animals and humans at all times.

Safety equipment (life buoys, ropes) and warning signs shall be maintained and checked periodically for wear.

Watering Facility

The water troughs in the pastures and loafing areas must be checked often for leaks and the proper functioning of automatic water level control devices. Replace or repair defective automatic water level controls immediately. Water troughs not in use should be drained to prevent the formation of algae.

The area around the water troughs will need to be shaped and filled to prevent rutting, ponding, organic build-up, and erosion around the concrete.

Pasture Management

The pastures for the dry cows shall be managed for optimal growth of vegetation. The pastures are divided into sub-pastures as needed. The pastures will be managed in such a manner that will result in a well maintained stand of grass. Grazing of pastures should follow the recommendations provided by NRCS.

The actual time that cows are on pastures shall be adjusted based on production of forage and amount of nutrients applied. It is suggested that a ledger be kept to record the number of cows and time kept on individual pasture areas.

The pastures must be managed to prevent denuded areas from developing. This will be accomplished using gates and fencing to confine cows to specific areas. Portable feeders, portable shades, electric fence and portable water troughs are ways to help distribute the cows, and ultimately, evenly spreading the nutrients over the pastures. Electric twine can be used to subdivide the pastures and restrict grazing to the desired areas. This will help prevent the formation of denuded areas. A daily use record should be maintained in order to ensure uniform distribution of the nutrients. If a denuded area starts to develop, immediate corrective measures must be taken. Corrective actions may include, but not be limited to, temporarily fencing off the area, reseeding the area, and relocating the cause of the denuded area if applicable. Any buildup of manure (i.e., around gates and feeders) should be removed, analyzed for N, P and K then spread according to the nutrient management plan.

Supplemental fertilizer may be needed to maintain good vegetation conditions in the pastures. A soil test will determine which nutrients are lacking and the amount to apply. Only apply the amount of nutrients recommended by the soil test and in accordance with the nutrient management plan.

Animal Trails and Walkways

The walkways should be cleaned frequently to prevent a buildup of manure and reshaped as necessary to facilitate the removal of surface runoff. Fences and gates shall be used to control the access and movement of cattle using the animal trails and walkways and to prevent the creation of ruts in the trails and walkways. Cows will be moved non-stop between the barn and the pastures and not allowed to loaf or rest on the walkway.

The solids removed from any trails or walkways shall be analyzed for N, P₂O₅, and K₂O as they are removed and before they are spread.

Manure Spreader

Collecting a sample from the manure spreader is one of the preferred methods of collecting a solid manure sample because it represents what is being applied to the field. In addition, by the time manures have been scraped, collected, and loaded into a manure spreader, reasonable mixing has been performed. However, you should still collect at least 5 sub-samples following the collection procedures for the solids separator.

Nutrient Management

When applying waste or commercial fertilizer, calibrate application equipment to ensure that applied rates at recommended rates. It is important to avoid unnecessary exposure to chemical fertilizers and organic wastes. Protective clothing, respirator, gloves and footwear shall be worn when appropriate. When cleaning equipment after nutrient application, residual fertilizers or wastes shall be removed and saved in an appropriate manner.

- Keep records to document implementation activities. (Refer to PQC for guidance for the kind of records that should be kept).
- Calibrate manure application equipment according to procedures outlined in this section.
- Dispose/recycle nutrient containers according to state and local guidelines or regulations.
- Apply nutrients according to the procedures outlined in Section 6.
- Delay application of manure if precipitation capable of producing runoff is anticipated within 24 hours of the application event.

- Monitor soil test phosphorus levels and adjust nutrient application rates accordingly.
- Do not apply manure and wastewater on saturated, frozen and/or frequently flooded soils.
- Adhere to no-application setbacks as outlined on the conservation plan maps in Section 4.

Pesticide Management

The owner/operator is responsible for the proper application and storage of pesticides including calibration and maintenance of all equipment used in application of pesticides. No pesticides are stored on-site. Chemical fertilizers are purchased on an as needed basis. In addition, moveable mixing station is used and long time use of a specific mixing site is avoided therefore minimizing ground contamination. The following should be addressed, according to pesticide labels, in order to minimize negative impacts to the environment:

- Be trained and licensed to apply restricted pesticides.
- Dispose of leftover materials and containers according to label requirements.
- Read and follow all label directions and Material Safety Data Sheets that come with the pesticides.
- Avoid mixing pesticides and loading or rinsing sprayers next to wells, streams, sinkholes, drainage ditches, etc. Install anti-siphon devices on all hoses used to fill spray tanks.
- Avoid exposure to pesticides. Wear appropriate clothing, gloves, respirator, and footwear as specified on the product label. Wash affected area as soon as possible after possible exposure and prior to dining or smoking.
- Check product label for reentry time. Follow restricted entry intervals.
- Triple –rinse empty containers is considered as a part of an integrated pest management system. Provide areas for emergency washing for those who might accidentally come in contact with chemicals.
- Use field scouting to determine when treatment threshold has been reached. Treatment thresholds for specific pests and crops are often available from the local Cooperative Extension Service office.
- Alternate pesticides of dissimilar mode of action or chemistry to reduce-target species resistance.
- Select methods of application that will result in the least potential for runoff and leaching.

Waste Utilization

Follow Nutrient Management Plan included in this document for the proper manure application rates, timing, and methods of application to provide nutrients to support crop production and to minimize the transport of nutrients to ground and surface water.

Commercial Fertilizer Application Equipment Calibration

The nitrogen applicator and the commercial broadcast spreaders will be set per the manufacturer's recommendations, then filled with a known amount and checked over a known acreage. Adjustments will be made to achieve the planned rates.

Animal Mortality Management

Inspect the facility to note any maintenance needs or indicators of operation problems.

Filter Strip

Establish a strip of perennial vegetation for trapping sediment and other pollutants from runoff or waste water.

Harvest the filter strip vegetation annually to encourage dense growth, maintain an upright growth habit and remove nutrients and other contaminants that are contained in the plant tissue.

Control undesired weed species, especially state-listed noxious weeds.

Inspect the filter strip after storm events and repair any gullies that have formed, remove unevenly deposited sediment accumulation that will disrupt sheet flow, and reseed disturbed areas.

Periodically re-grade the filter strip area when sediment deposition at the filter strip-field interface jeopardizes its function. Reestablish the filter strip vegetation in these re-graded areas, if needed.

Manure Spreader Calibration

There are several methods that can be used to calibrate the application rate of a manure spreader. It is desirable to repeat the calibration procedure 2 to 3 times and average the results to ensure a more accurate calibration. Calibration should take place annually or when manure is being applied from different sources or consistency.

Before calibrating a manure spreader, the spreader settings should be adjusted so that the spread is uniform. Most spreaders tend to deposit more manure near the spreader than at the edge of the spread pattern. Overlapping can make the overall application more uniform. Calibrating of application rates when overlapping, requires measuring the width of two spreads and dividing by two to get the effective spread width.

To calibrate the manure spreader use either of the following procedures.

Spreader Calibration - Method 1

Equipment: plastic sheet 6 x 6ft or 10 x 10ft, scale, bucket

1. Weigh sheet with bucket on the scale
2. Lay sheet in field in the path of manure spreader positioning it so the tractor will be at spreading speed before it reaches the sheet.
3. After spreading weigh sheet and manure in the bucket. Subtract weight of sheet plus bucket
4. Tons manure/acre = lb manure x 2 1.8, sheet size, sq ft

Spreader Calibration - Method 2

Equipment: yard stick, rope

1. Determine manure spreader capacity
2. Tie rope around tractor tire to determine distance traveled in one revolution
3. Spread manure load, counting wheel revolutions to determine the distance traveled
4. Measure width spreader is covering with manure, multiply by distance traveled

